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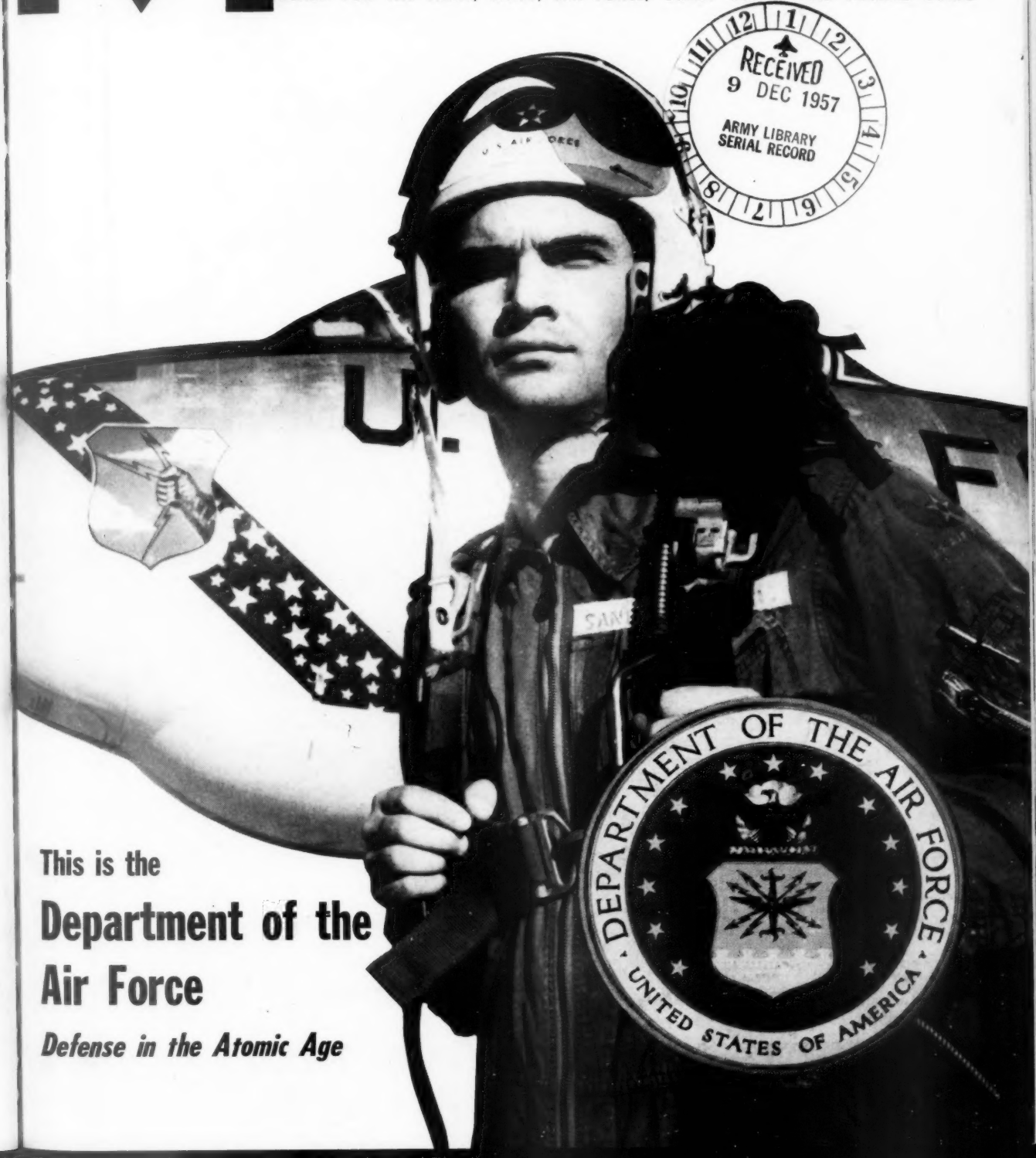

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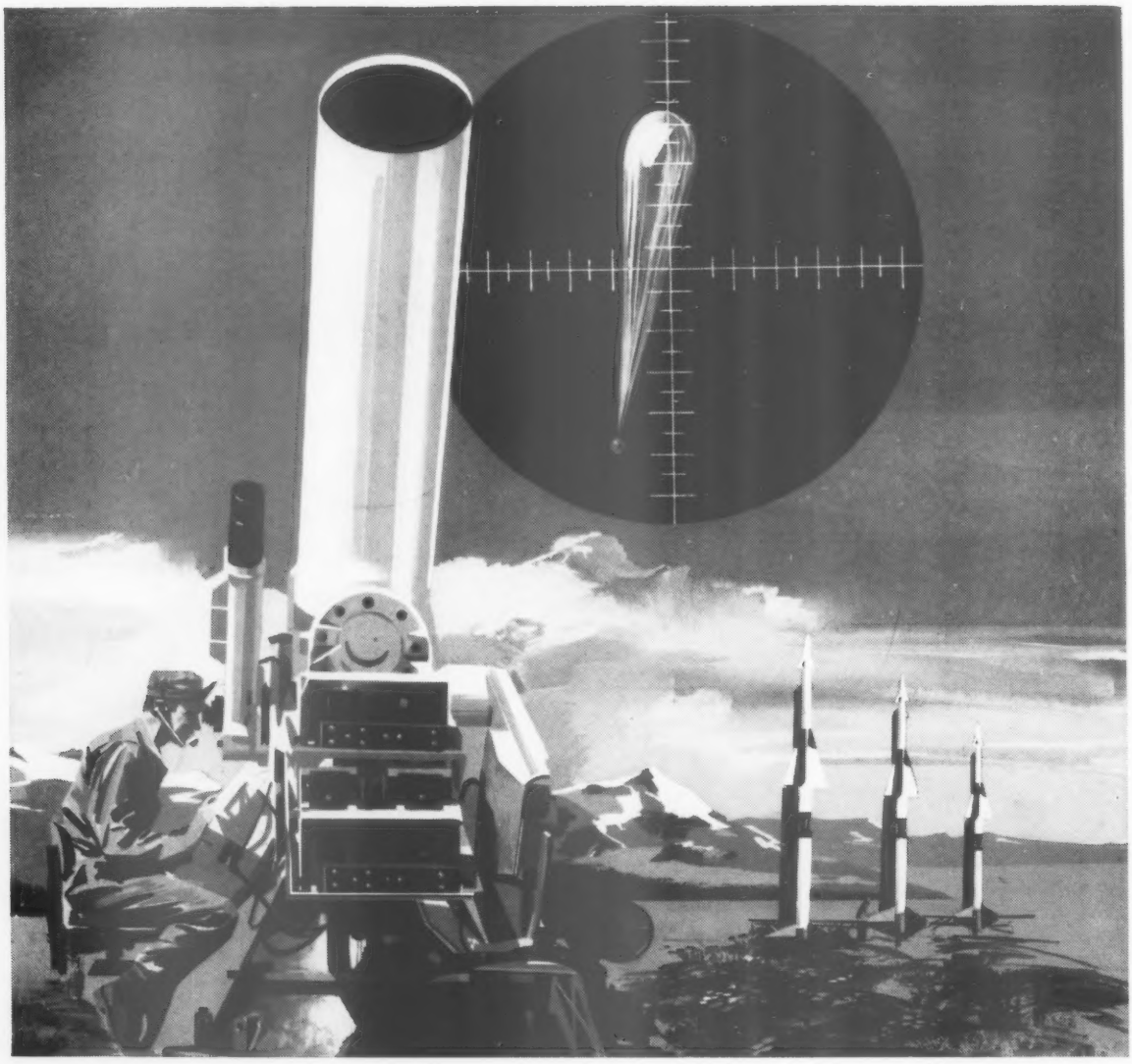

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ARMED FORCES MANAGEMENT **Volume 4—No. 3**

Roy B. Southworth, Executive Director

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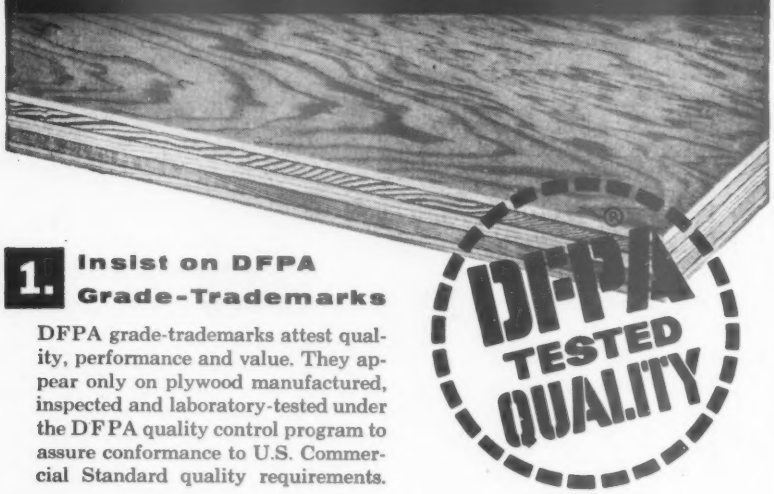

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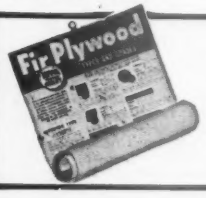

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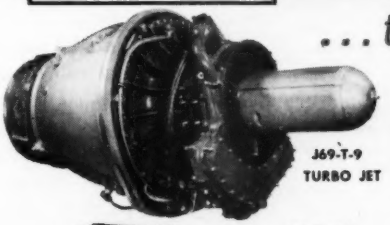
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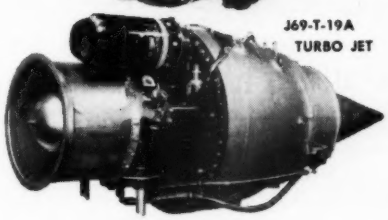
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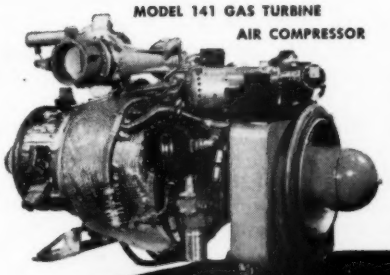
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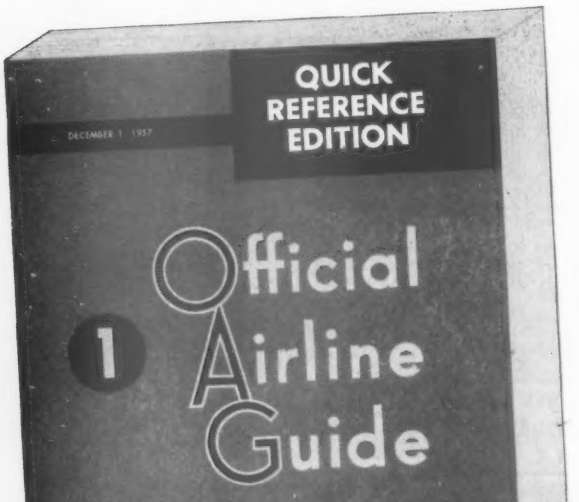

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EDITORIAL

Personnel Turnover — Today's Toughest Military Problem

THE quality of our Armed Forces boils down to the quality of the people in them. So said General Nathan F. Twining, chairman of the Joint Chiefs of Staff, recently. He added:

"We cannot have good new weapons and equipment unless the people who do the research and development work are technical experts. We cannot handle this new equipment efficiently unless the men who use it are highly skilled and motivated. We cannot have success on the future battlefield without leaders possessing greater courage and judgment than ever before. Our plans are no good unless they are developed by intelligent planners.

"One of our greatest problems today is the turnover of our personnel, both military and civilian. We are constantly losing men after we have trained them and having to start all over from scratch training their replacements.

"In order to have the necessary quality and combat effectiveness, means must be found to encourage more of our trained people to make careers of military service."

Vitally concerned persons have recently gone one step further and said *the* toughest unsolved problem of the services is obtaining and retaining high calibre personnel. The problem has made imperative the development of an effective system of personnel management, but even the best utilization system is not going to solve the problem.

Basically, the services just have not been given the tools, such as salary increases, necessary for a solution. Far too often, the military search for outstanding technicians amounts to little more than glorified Want Ads, appealing only to the emotions.

Industry matches the services in fringe benefits (insurance, hospitalization, housing, etc.), and pays a salary from three to four times higher generally for the same technical work. The patriotism appeal has little effect when it can be shown that an airman, for instance, can leave the service, enter private industry, and be re-hired by the Air Force (through the company) to work on the same job he had before—and at the same salary the Air Force now pays its Chief of Staff. This is happening constantly and makes the personnel turnover solution impossible.

The very obvious answer is to allow the services to become competitive in the areas where competitors are most effective. This means pay more money for talent and offer a reasonable amount of job security.

Stop-gap efforts such as the proficiency pay plans instigated by the Pentagon in late summer are, admittedly, little better than weak emergency efforts. Presumably, the Department of Defense is banking on the Cordiner proposals, or something very similar, to correct the situation. But most of the very sound Cordiner Committee plans were very abruptly halted by last session's "false-economy" Congress and a note from Bureau of the Budget Director Percival Brundage that the Cordiner ideas were "inflationary." (The services say they spend more money each year finding and training new personnel and bringing them up to a state of combat readiness than the Cordiner plan would cost, if once operational.)

With the recent intensification of the missile and satellite race, certain elements of Congress have demanded more billions be spent for the missile program. No one has mentioned what is obviously just as important—more money for personnel.

General T. D. White, Air Force Chief of Staff, said last month, "There is no hope of achieving technical supremacy and managerial efficiency if our manpower turnover continues at its present high rate."

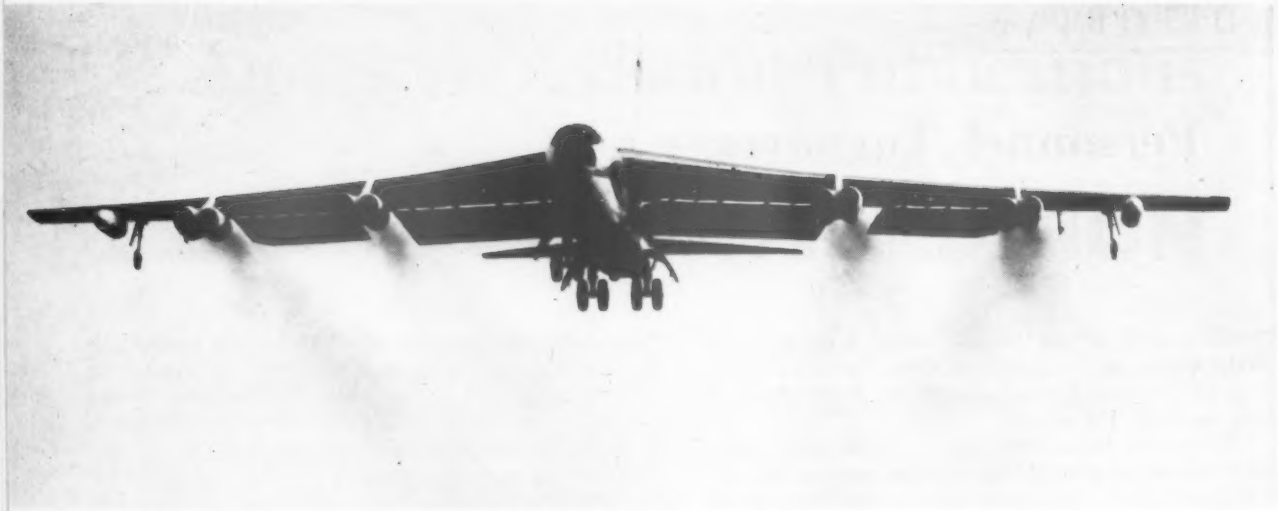
Here, in his words, is the reason why:

"We have found no substitute for men. We need and must have good men, intelligent men, well trained and highly skilled men—in reasonable numbers. We need high calibre men because we are faced with technical and managerial problems beyond anything previously known to the military."

As one indication of the rate at which the services are losing valuable men, last year over 75% of the airmen in the highly technical communications field whose first term enlistment expired—went home! Such a large turnover obviously results in decreased effectiveness, costs more money and requires additional effort and time to train new men.

It is further obvious that no amount of money poured into missile hardware is going to be worth anywhere near its cost if it is not controlled by the best minds in the country. But the services have been unable to attract and hold all they need of the country's technical talent. Turnover is lessening the capabilities of all services and lessening most the capability in the semi-skilled to highly skilled areas.

Frequently, in the past, persons with too great an interest in hardware have dispensed the turnover problem by pretending there is none. The standard solution in many new military programs has been to talk as though necessary numbers of trained personnel were available, when they are not. The turnover problem can no longer be circumvented, as it is now, by adding on the last page of each new service program the innocuous phrase, "personnel requirements will not be a limiting factor."



One of the mightiest weapons in the USAF arsenal is the Boeing B-52 Stratofortress shown here during a training flight.

AIR POWER and NATIONAL SECURITY

By Brig. Gen. Hewitt T. Wheless, USAF

Chief, War Plans Div., Directorate of Plans, DCS/Plans & Programs

FEW people today can fail to realize that we must place primary reliance for the security of this nation on air power. The national policy of the United States has recognized this for some time, and recent technological advances in air weapons forecast that air power will exert even greater influence on the outcome of world affairs in the future.

Air power is not something which is applied only if and when a major war is forced upon this country. The flexibility of air power allows it to be used as a force for peace and as an instrument of cold war. Its mobility enables it to be applied almost instantaneously anywhere in the world. Should war occur, it can impose relatively limited damage, or can be a device of tremendous destruction, wherever, whenever, and as required. Air power, therefore, has a great and unique contribution to make in advancing and securing our national interests in conditions ranging from peace to general war.

Spokesmen for air power have consistently emphasized the flexibility of air weapons. They have, to a large extent, however, acquired a reputation for talking in terms of a big war. This is not because they underestimate the likelihood of lesser conflicts nor the importance of being able to deal with them effectively. It is because they recognize that the threat to our homeland is of overriding seriousness and should receive priority over all other military considerations.

The first and highest purpose that air power can serve is to deter general war. Winning such a war is better only than losing it. The consequences of the exchange of air-delivered nuclear weapons, which would take place in general war, regardless of its ultimate outcome, clearly point out that there is no acceptable alternative to our national policy of deterrence.

Deterrence of enemy air attack depends upon adequate United States air power. But what level of air power is required to deter such an attack? If, through the eyes of our enemy, our air power looks sufficiently formidable, he will not take the risk of launching an attack against us. If his assessment of our air power is one of weakness, he may be tempted to do so. It would appear then, that we must develop and maintain a level of air power which, regardless of the blow the enemy could strike against us, could deliver such devastation to the enemy homeland that would convince him of the foolhardiness of such a course of action.

Unfortunately, these truisms depend upon the mental calculations and evaluations of the men in the Kremlin and are of little value in determining definitive military requirements. It cannot be said with assurance that any particular level of force will deter war, because that would entail mind reading of very secretive and unwilling minds. Military strategies and military forces must be based upon the possibility of being forced to fight a general war, and our national policy of deterrence can best be served by military forces which have the capacity to prevail in that event. This requires a level of air power which, when employed in coordination with all other military strengths of this country and of our Allies, can assure the survival of the Free World for the time it takes to destroy the ability and will of the enemy to wage war.

These same forces must also be able to deter, or cope with, local aggression. It is possible that, because of the terrible mutual destruction involved, the likelihood of general war may decrease, and that, consequently, the Soviet Bloc will prefer to seek the achievement of its objectives through local aggression. This possibility, however, is predicated upon the continuance of a military posture which does in fact deter the Soviets from initiating a general war. Under these conditions, it is clear that we must maintain a military posture capable of prevailing in the event of general war, and, at the same time, we must be prepared to counter local aggression.

The wide range of situations in conflicts less than general war which could confront the United States presents many complicated and complex issues. It is impossible to tailor a precise strategy and force composition for each of the practically unlimited number of possible situations. Some generalities applying to conflicts less than general war in the present and foreseeable future can be drawn and are useful in military considerations:

1. There is always the possibility that local war may broaden into general war. Thus, a general war posture which causes the enemy to be reluctant to engage in general war will, likewise, cause some reluctance to engage in local aggression, especially if major issues are known to be involved.

2. Local conflicts in which major powers are engaged either directly or indirectly are fought under the mutual permission of those powers and under the sanction of their general war forces. Either side could, at any time, increase the violence and scope of the conflict if it has the willingness to do so.

3. The outcome of local conflicts, which remain local, will not be determined by a military decision in the usual sense of the term. Major forces of both sides having the capability to alter the local military situation almost instantaneously will remain uncommitted.

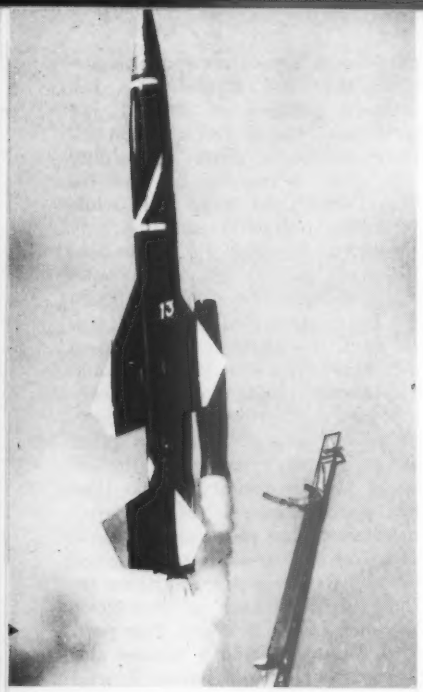
Thus, the likelihood of local conflicts, the scope of such conflicts, and their ultimate outcome are closely related to the general war posture of the belligerents, the issues involved, and the amount of resources each side is willing to risk. As general war becomes less acceptable to the Soviet Union, it is probable that local conflicts will become less likely, and those which do occur will be fought over issues of marginal concern with results tending toward compromise and stalemate.

It is obvious that we cannot threaten to unleash the full destructive capability of all our military forces over each issue in the continuing conflict. Our cold war and local war strategy must be calculated to present threats of force which, in relation to the issues involved, impose unacceptable risks to the enemy and which, at the same time, are realistic and appear credible to him. Our success in deterring local aggression will depend upon the credibility of these threats. Thus, we must have the flexibility to respond to local aggression with any degree of force that is required and, most importantly, our determination to do so must be made crystal clear. The flexibility of air weapons enables the same forces that are maintained for general war to operate effectively in local conflicts. Air power can be applied swiftly on the scale of effort required.

Air Power Value

The worth of the air power of the U.S. can best be measured by the contribution it makes to the achievement of our national objectives. These objectives are sound, clear, and to the point. War of any nature must be prevented not by capitulation, but through a position of strength. If, nevertheless, war is forced upon us, we must reduce the enemy's capability to the point where he has lost his will and ability to wage war, while safeguarding our nation and our way of life. Air power makes a tremendous contribution toward the achievement of these objectives. No other military force has contributed so much, so directly, to the maintenance of peace since World War II. If war should occur, no other military force can contribute as much to victory with survival as air power. Certainly other military and nonmilitary strengths are essential for the security of the Free World. But the first essential—in terms of maintaining the peace and in terms of decision in war—is air power capable of carrying out its missions regardless of the whims or stratagems of the men in the Kremlin. Our position of leadership among nations and our very survival as a nation depend upon an adequate and effective air power.

A step into the future —Capt. Earl Weaver, 11th Fighter Interceptor squadron, wearing a new high-altitude partial-pressure suit, stands next to the Convair F-102A Delta Dagger.



A USAF Bomarc interceptor missile is launched on test flight from the Air Force Missile Test Center, Patrick Air Force Base, Fla.

The Air Force Defines Its Mission and Capability

Based on material from a Background Fact Sheet supplied by the United States Air Force.

OPPOSING forces and the possibility of open warfare are problems which have plagued our nation before. The significance of the current situation stems from the existing capability of an implacable enemy to launch an attack of appalling intensity directly against the United States. Never before has our nation faced a threat so immediate in nature and potentially destructive in scope. Never before has a would-be world conqueror had in his grasp the methods and weapons which conceivably could eliminate the roots of resistance to his aspirations.

Two threats confront the United States. The most serious and immediate threat is the existing and increasing Soviet capability to launch nuclear attack directly against the United States. This threat places our ultimate national survival at stake. The second threat, limited aggression and peripheral war, affects our national interests, and, left unopposed, could become an ever-growing danger to our allies and the sovereignty of free nations everywhere.

The Soviet Union has a huge ground force. Her navy includes a powerful submarine force. They have developed and will soon have substantial numbers of long range jet bombers capable of delivering atomic weapons on the United States and our allies. They have produced large numbers of jet fighters and light bombers of various types. The Soviets are reported to be developing missiles designed to fly at thousand of miles per hour, plunging down upon targets with atomic fury. They are maintaining more men in uniform than any other nation in the world. Numerically, they have the largest air force in the world, and they are closing the qualitative gap between them and the USAF. They are capable of building atomic weapons at an imposing rate.

USAF Missions and Functions

The missions of the Air Force—and of the Army and Navy—were originally laid down broadly in the National Security Act of 1947. The Key West Agreement in March 1948 spelled out the services' missions in detail to avoid service duplication and save the taxpayers money. These missions, reaffirmed by a Department of Defense directive in March 1954, today serve as the principal statutory instructions determining the organization, weapons, and employment of all the nation's armed services. As the nation's air arm, the Air Force is charged with primary interest in all operations in the air, and is primarily responsible for prompt and sustained aerial combat operations.

One of the major functions of the United States Air Force is to gain and maintain general air supremacy. Strategic, air defense, tactical and theater air forces complement each other and all contribute in achieving this comprehensive objective. Strategic air forces destroy aircraft, facilities, and supporting industrial complexes in the enemy's heartland; tactical and theater air force attack similar targets within range of their aircraft from bases around the periphery, while the Air Defense Command maintains constant readiness to discharge the related mission of defending the United States against attack by those enemy aircraft which approach our borders with hostile intent. All combat elements of the Air Force participate to a greater or lesser degree in the defeat of enemy air forces, the control of vital areas and the establishment of local air superiority. Tactical and theater air forces participate directly in surface battles and campaigns, perform interdiction operations and provide airlift. The Strategic Air Command has been made primarily responsible to effect, through the systematic application of force to a selected series of vital targets, the progressive destruction and disintegration of the enemy's war-making capacity to a point where he no longer retains the ability or the will to wage war. Tactical and theater air forces contribute to the performance of this function within their capability and as required. Strategic and tactical air forces perform aerial reconnaissance. Operating air lines of communication and providing air transport for the Armed Forces are Air Force functions discharged primarily by the Military Air Transport Service.

Included among activities in support of these basic functions are the procurement, selection, training and continued education of our personnel and the development, testing, procurement,

maintenance, storage and distribution of material. These activities are great in magnitude and scope and have the common objective of enabling our fighting elements to discharge the basic functions of the Air Force with decisive effectiveness.

Capabilities

The Air Force is usually considered as a weapon of massive destruction; however, this view overlooks the inherent flexibility of airpower which can deliver weapons ranging from conventional bullets through rockets, napalm, and high explosives to nuclear weapons measured in the megaton range, and can deliver such munitions selectively.

In the light of the world situation, and the missions properly assigned to it, the Air Force has developed and will maintain the capability-in-being to cope with either global war or limited aggression. But the ability to win wars is not the greatest value of airpower and atomic weapons to our nation. Their greatest value lies in their potential for preventing war. This deterrent characteristic stems from the Air Force's massive capability—and the inherent mobility and flexibility of the air weapon.

In World War II the Air Force dropped 2.7 megatons of high explosive bombs. Even adding the bomb tonnage of World War I and the Korean conflict the United States has dropped less than 3 megatons of bombs from aircraft since the airplane was invented. Today, one USAF aircraft can deliver one nuclear weapon many times the power of all bombs previously dropped by this nation. As General Twining has said,

> "The atomic bomb has not magically cancelled the principle of mass, but it has altered the way mass is used—mass is no longer measured in manpower, but in megatons."

Many people, in thinking of nuclear warfare, think only of our larger, long range aircraft. And while it is correct that strategic air capabilities give us our greatest offensive punch, the development of nuclear weapons suitable for delivery by jet fighters and light bombers has given a tremendous striking capability to tactical air forces. In fact, all our tactical fighters and light bombers could carry either atomic or other types of bombs, depending upon what should be needed to do the job. Continued improvements in speed and range of tactical aircraft, inflight refueling, and improvements in cargo and troop carrier aircraft have greatly increased the offensive capability of these forces.

Air defense operations for the continental United States are conducted with interceptor aircraft, rockets, and antiaircraft guns, backed up by an aircraft control and warning system which is to locate intruders and guide the interceptors to them. The interceptors are armed with rockets and air-to-air missiles.

Personnel Resources

Each facet of each function requires highly trained and skilled personnel, using specialized equipment, controlled and directed by commanders experienced in that particular function. Yet, the functions are so interrelated that the operation of each element must be coordinated with the whole to achieve the required concentration of force and the full decisive capability of the Air Force. This interrelationship makes it mandatory that key Air Force personnel be familiar with the capabilities and limitations of other air combat and logistic forces.

Skill and experience in the employment of airpower is one of the great factors behind the strength of the Air Force. Regardless of technological developments, the skill and knowledge to use effectively the air weapons of today and tomorrow is a unique and invaluable resource of the American people.

Air Weapons

Of major importance to Air Force effectiveness—and to national security—is the goal of an all-jet combat Air Force. With only a few exceptions, the combat elements of the U.S. Air Force today are equipped with high-performance, jet-propelled aircraft.

Air Force striking power is being strengthened further by guided missiles, which forecast, perhaps more than any other weapons, what the Air Force of the future will be like.

The Falcon, an air-to-air guided aircraft rocket, is in operational units. The Air Force has the TM-61 Matador, a tactical surface-to-surface missile with nuclear capabilities deployed in operational units in Germany. For air defense the IM-99 Bomarc, a long range surface-to-air pilotless interceptor is under development.

Research and Development

Continued research and development is mandatory if our nation is to hold its own in the technological race with the Communist world. Experimental Air Force aircraft have flown more than twice the speed of sound and probed the threshold of space more than 90,000 feet above the earth. Air Force operations more than 10 miles above the earth are becoming routine. At altitudes where the blood boils if unprotected, pressure cabins and pressure suits protect Air Force pilots flying where man has never before ventured.

Air Force leaders state we know positively a nuclear-powered airplane, with worthwhile performance, can be built. This aircraft will be safe to operate. Built-in controls will make the nuclear engine no more dangerous than any form of conventional propulsion.

A major factor in the competition between the Communist and the free world has been a steady Soviet build-up of technical manpower. Though they started with a much lower number of scientists and engineers they are currently training such personnel at a considerably higher rate than the United States. The Soviets leave no doubt that they have a solid scientific foundation, advanced technological, and competent manufacturing facilities backing up their airpower. They are a worthy competitor in an area which we once considered was our greatest asset, technological quality offsetting Communist quantity.

Air Logistics

Modern airpower eliminates the necessity of defeating defending surface forces before striking at the very heart of a nation's war-making capacity; therefore, warfare can become immediate and total from the moment hostilities begin. The traditional build-up phase after war begins can no longer be assured, and the existence of adequate air forces-in-being becomes mandatory. As a logical corollary, air logistics forces must rely increasingly upon materiel-in-being, rather than depend upon a vulnerable mobilization base potential.

The overall objective of air logistics forces is to procure, transport and maintain men and materiel to the degree necessary to adequately support the combat elements of the overall air force—and to accomplish this within the economic limitations established by national resources. Air logistics forces are designed to provide global support for a highly flexible, combat-ready Air Force. Consequently, they must be prepared always to fulfill scheduled future commitments, and yet ready to meet any immediate requirement for men and materiel. In the age in which we live, this requirement may vary from global nuclear hostilities to the so-called brush-fire or peripheral war.

The abundance of supply theory is giving way to a concept of electronic requisitioning and worldwide air transportation by which air logistics forces can meet the normal requirements of forces deployed on a global scale, and, in an emergency, mass men and materiel at any spot when and where needed. In essence, time is being substituted for inventory.

James H. Douglas
Secretary of the Air Force

DEPARTMENT of the AIR FORCE

THE Department of the Air Force by law includes all field headquarters, forces, reserve components, installations, activities and functions under the control or supervision of the Secretary of the Air Force. The executive portion of the Department consists of the Office of the Secretary of the Air Force and an Air Staff headed by the Chief of Staff.

Organizational Doctrine

The Secretary of the Air Force is charged with the responsibility and vested with the authority for conducting all affairs of the Department of the Air Force. The Chief of Staff presides over the Air Staff and is directly responsible to the Secretary of the Air Force for the efficiency of the Air Force, for its state of preparedness for military operations, for plans therefor, and for their proper execution. The Air Staff renders professional aid and assistance to the Secretary and the Chief of Staff.

Assistant Chiefs of Staff are adjuncts to the Office of the Chief of Staff and are charged with functioning in either one of two capacities: (1) exercising responsibility over programs, which the Chief of Staff feels can more appropriately be accomplished at that level, or (2) acting as a focal point for, and providing added emphasis to, designated programs during critical developmental, implementing or operational stages. Those agencies falling within the latter category are abolished when the need for a focal point or added emphasis no longer exists. Assistant Chiefs of Staff are directly responsible to the Chief of Staff for accomplishing their responsibilities and may deal as necessary with agencies across the Air Staff and with the field commands in carrying out their functions.

The Deputy Chiefs of Staff and the Comptroller of the Air Force represent the Chief of Staff within their functional areas and may act for him on matters falling within the scope of their responsibilities. They have a policy-making responsibility, the right to make final decisions and issue directives in matters pertaining to the functional responsibilities of their respective staff areas. They also are responsible for keeping the Chief informed and for exercising their judgment in referring problems for his decision. In the accomplishment of their mission responsibilities, the Deputy Chiefs of Staff and the Comptroller are personally accountable and responsible to the Chief of Staff for the acts of their subordinate Assistants For and Directors in carrying out their assigned responsibilities.

Assistants For are adjuncts to the offices of the Deputy Chiefs of Staff and are charged with functioning in either one of two capacities: (1) exercising responsibility over programs that cut across the entire functional staff area of a Deputy Chief of Staff and which the deputy feels can more effectively be accomplished at that level, or (2) acting as a focal point for, and providing added emphasis to, designated programs falling within the functional jurisdiction of a Deputy Chief of Staff. Those agencies falling within the latter category are abolished when the need for a focal point or added emphasis no longer exists. Assistants For are directly responsible to their Deputy Chief of Staff for accomplishing their responsibilities and, in carrying out their functions, are guided by essentially the same operating principles which are applicable to directors.

Although each Deputy Chief of Staff is responsible for a family group of Directorates, he is not expected to exercise close supervision over the group. The Directors are personally accountable and responsible to their respective Deputy Chiefs of Staff for the accomplishment of their functional responsibilities.

In keeping with the concept of functional teamwork, the Directors are expected and encouraged to work directly with each other. While each Director is responsible for keeping his Deputy Chief of Staff properly informed, the Deputy Chiefs of Staff do not constitute "channels" through which Directors communicate within or outside their family areas. In the case of a job which must be done, or a decision which must be made involving two or more Directorates, the Director having major responsibility or interest will assume the status of team captain in relation to the Directors having secondary or concurrent responsibility.

Air Staff decisions are made at the lowest level having access to sufficient information upon which to base sound decisions in accordance with established policy. This is usually the office of a Director. A Director may, at his discretion, call upon any Deputy for advice or for a decision.

At Division or Branch level, the team system eases the formalized channels of communication and facilitates the handling of heavy workloads. The team system promotes the development of a deeper sense of individual responsibility among the members of the Air Staff, commensu-

C Fullpak gets heaped loads of sand and gravel. "I have found C Tournapull Fullpaks to be ideal earthmovers," comments Superintendent Vizzare

FT. LEWIS military-civilian traffic snarl ended by new through highway

Military vehicles at Ft. Lewis, Washington, are frequently delayed by trucks and automobiles traveling on Route 99, a busy highway that splits the reservation. To end the inconvenience caused by civilian through-traffic, the Washington State Highway Commission is relocating 3.7 miles of highway passing through Ft. Lewis.

Northwest Construction Company, Seattle (subcontracting all earthmoving and clearing from Woodworth Construction Company) is using a fleet of 9 LeTourneau-Westinghouse C Tournapulls with 18-yard Fullpak* scrapers and 5 older 16-yard model "C's" to move the 775,000 yards on the project. Material is mostly gravel, sand, hardpan, and a small amount of clay. About 432,000 yards of fill must be moved out of a borrow... the remainder from the right-of-way.

General Superintendent John Vineyard says, "We like the overall performance of our Fullpaks. Good loading, fine flotation — high maneuverability make this a scraper that does a very fine job for us." (Northwest recently took delivery of 6 B Tournapulls with 27-yd. Fullpak scrapers.)

Work in soft footing

Although wet weather had made some sandy gravel areas very soft, Tournapulls' big, low-pressure tires provided enough flotation and traction for Fullpaks to keep working profitably. In very slippery footing, Tournapulls' automatic power-transfer differential (channeling more power to the drive wheel on firmer ground) kept machines from cutting-in and bogging down.

"We can work our Tournapulls where other rigs would never go," says Job Superintendent Don J. Vizzare.

Finish prior road job ahead of schedule

Before coming here, the Northwest fleet worked on a 300,000-yard highway job near Lilliwaup, Wash. With the new C Fullpaks, earthmoving took 5 months — about ⅔ of scheduled time.

You will get steady production in roughest going from rugged L-W Tournapull® scrapers, Tournatractors, cranes, and hauling units. Mounted on big, load-rated tires, these off-road machines travel cross-country or over paved roads at convoy speed. Weatherproof, easy-to-operate electric controls are ideal for GI operation, in any climate. World-wide distributor network for factory parts, service and trained operators. Write to our Government Sales Division in Peoria, Illinois, for information... or for names of owners of LeTourneau-Westinghouse equipment to handle contract earthmoving.

Tournatractor—Trademark Reg. U.S. Pat. Off. *Trademark CP-1486-ML-1

On typical 5100-ft. hauls, Tournapulls traveled in 5th gear, at speeds to 28.4 mph. Pictures were taken near Ft. Lewis, Washington.

LETOURNEAU-WESTINGHOUSE COMPANY, PEORIA, ILLINOIS

A Subsidiary of Westinghouse Air Brake Company

Where quality is a habit

rate with the greatly increased measure of responsibility and authority which has been vested in them. Application of the team system carries with it, however, the obligation of furnishing sufficient information to the Directorate level so that management controls may be maintained.

Purpose

The United States Air Force includes air combat and service forces. It is organized, trained, and equipped for prompt and sustained combat operations in the air. Of the three major services, the Air Force has primary responsibility for: defending the United States against air attack; gaining and maintaining air supremacy; defeating enemy air forces; controlling vital air areas; establishing local air superiority except as otherwise assigned; formulating joint doctrines and procedures, in coordination with the other services, for the defense of the United States against air attack, and providing the Air Force units, facilities and equipment required therefor; strategic air warfare; organizing and equipping Air Force forces for joint amphibious and airborne operations; furnishing close combat and logistical air support to the Army; providing air transport for the armed forces except as otherwise assigned; providing Air Force forces for land-based air defense; developing, in coordination with the other services, doctrines, procedures, and equipment for air defense from land areas; providing an organization capable of furnishing adequate, timely, and reliable intelligence for the Air Force; furnishing aerial photography for cartographic purposes; developing, in coordination with the other services, tactics, technique, and equipment of interest to the Air Force for amphibious operations; and developing, in coordination with the other services, doctrines, procedures and equipment employed by Air Force forces in airborne operations.

Secretary of the Air Force

James H. Douglas

The Secretary of the Air Force is responsible for the conduct of all affairs of the Air Force Establishment, including those necessary or appropriate for the training, operations, administration, logistical support and maintenance, welfare, preparedness, and effectiveness of the Air Force, including research and development, and such other activities as may be prescribed by the President or the Secretary of Defense, as authorized by law. In the absence of the Secretary, the Under Secretary will perform the duties of the Secretary; in the absence of the Secretary and Under Secretary, the Assistant Secretaries in the order fixed by their length of service as such will perform the duties of the Secretary.

Under Secretary of the Air Force

Malcolm A. MacIntyre

The Under Secretary of the Air Force, as principal assistant to the Secretary, acts with the full authority of the Secretary, as deputy Secretary of the Air Force.

Assistant Secretary of the Air Force (Research and Development)

Richard E. Horner (acting)

The Assistant Secretary of the Air Force (Research and Development) is responsible for direction, guidance, and supervision over all matters pertaining to the formulation, review, and execution of plans, policies, and programs relative to: basic and applied research; development; determination of Air Force qualitative requirements; and continual integration of technology with military requirements and procurement planning.

Assistant Secretary of the Air Force (Manpower, Personnel and Reserve Forces)

David S. Smith

The Assistant Secretary of the Air Force (Manpower, Personnel and Reserve Forces) is responsible for direction, guidance, and supervision over all matters pertaining to the formulation, review, and execution of plans, policies, and programs in the functional fields of: manpower; military and civilian personnel, including health, welfare, morale, and fair employment practices; reserve components, including the Air Force Reserves, the Air Force Reserve Officers Training Corps, and the Air National Guard; Civil Air Patrol; military, civilian, and industrial personnel security programs; training; organization; management principles and techniques, including the Management Improvement Program; Air Force participation in Civil Defense activities; contracts for personal services and training; travel and per diem allowances; Board for the Correction of Military Records; and Secretary of the Air Force Personnel Council and its components boards, including the Air Force Discharge Review Board, the Air Force Board of Review, the Air Force Personnel Board, the Air Force Disability Review Board, the Air Force Physical Disability Appeal Board, and the Air Force Decorations Board.

Assistant Secretary of the Air Force (Materiel)

Dudley S. Sharp

The Assistant Secretary of the Air Force (Materiel) is responsible for direction, guidance, and supervision over all matters pertaining to the formulation, review, and execution of plans, policies, and programs in the functional fields of: industrial resources, security, and mobilization; procurement planning and programing; procurement, production, storage, maintenance, distribution, and disposal of all materiel, supplies, and equipment; Air Force participation in the Mutual Security Assistance Program; transportation, communications, and other service activities; renegotiation affairs, contract appeals, and related activities; applications engineering; and civil aviation.

Assistant Secretary of the Air Force (Financial Management)

Lyle S. Garlock

The Assistant Secretary of the Air Force (Financial Management) is responsible for direction, guidance, and supervision over all matters pertaining to the formulation, review, and execution of plans, policies, and programs in the functional fields of fiscal and financial management activities and programs, including: budgeting, budget review of Air Force requirements and budget presentations; accounting and accounting systems; finance, including disbursement and collection of funds; progress and statistical reporting, and interpretation of such management data; management analysis and special program status reports; contracts for management engineering services; auditing; and contract financing. The Assistant Secretary of the Air Force (Financial Management) is responsible for directing and supervising the Comptroller of the Air Force. While the Comptroller is directly responsible to the Assistant Secretary (Financial Management), he has a concurrent responsibility to the Chief of Staff.

Special Assistant Installations

John M. Ferry

The Special Assistant for Installations is responsible for direction, guidance, and supervision over all matters pertaining to the formulation, review,

and execution of plans, policies, and programs in the functional fields of: installations planning and programming; acquisition and disposal of real estate; construction of bases and facilities; family housing; maintenance of real property.

Director, Legislative Liaison

Maj. Gen. Joe W. Kelly

The Director of Legislative Liaison advises and assists the Secretary and all other principal civilian and military officials of the Department concerning Air Force legislative affairs and congressional relations, except appropriation matters. He is responsible for: coordinating and supervising the Air Force legislative program, including the preparation of reports, testimony, and related statements on legislation; processing replies to congressional inquiries and investigations; and the release of classified information to the Congress.

Director, Information Services

Brig. Gen. Arno H. Luehman

The Director of Information Services advises and assists the Secretary and all other principal civilian and military officials of the Department concerning information services. He is responsible for: conducting the operations of the United States Air Force Information Services Program; planning, directing, and supervising internal and external information services; and developing and monitoring programs designed to maintain effective Air Force-civil relations.

Administrative Assistant

John J. McLaughlin

The Administrative Assistant advises the Secretary and his assistants on administrative aspects of matters coming within their jurisdiction, and is responsible for the internal administration and management of the Office of the Secretary of the Air Force.

Requirements Review Board

The Requirements Review Board, under the Chairmanship of the Under Secretary, is responsible for analysis and review of mobilization and current operational plans and policies upon which requirements for manpower, materiel and facilities are premised; the review of program progress against established objectives; and for assuring balance and correlation between programs and the requirements derived therefrom.

General Counsel

John A. Johnson

The General Counsel is the final legal authority on all matters arising within or referred to the Department of the Air Force, except those relating to the administration of military justice and such other matters as may be assigned to the Judge Advocate General. He furnishes all necessary legal advice and assistance to the Office of the Secretary of the Air Force, and is also responsible for providing legal advice and assistance to the Air Staff on matters relating to procurement, research and development, real property acquisition and disposal, construction of military public works, family housing programs, fiscal matters, civil aviation, and personnel security programs. He represents the Secretary of the Air Force in dealing with other departments and agencies of the Government on all matters relating to the negotiation of international agreements affecting the Air Force.

AIR STAFF

Chief of Staff: Gen. T. D. White

The Chief of Staff, United States Air Force, exercises command over the Air Defense Command, the Strategic Air Command, the Tactical Air Command, and has supervision over all other members and organizations of the Air Force. He is responsible for the efficiency of the Air Force, its state of preparation for military operations, and plans therefor. He presides over the Air Staff. He further serves as a member of the Joint Chiefs of Staff and the Armed Forces Policy Council of the Department of Defense.

Vice Chief of Staff: Gen. Curtis LeMay

The Vice Chief of Staff, United States Air Force, acts as the officer through whom the Chief of Staff exercises authority over the United States Air Force and assigned supporting forces. He performs the duties of the Chief of Staff in the latter's absence. He serves as chairman of the Air Force Council.

Assist. Vice Chief of Staff: Maj. Gen. J. E. Smart

The Assistant Vice Chief of Staff assists the Chief of Staff and Vice Chief of Staff in the development and implementation of plans and policies and in the overall direction of the United States Air Force. He exercises general supervision over administration in the Air Staff.

Asst. Chief of Staff, Air Defense Systems

Maj. Gen. E. M. Estes

The office has three major divisions —Aircraft & Associated Armament, Surface-to-Air Missiles, Electronics Supporting Systems; provides central control and direction for all air defense systems in the developmental and early operational stages.

The office coordinates and monitors

the overall planning and implementation of air defense systems management and programs; establishes priorities for the development of air defense systems; maintains liaison with the departments of the Army and Navy and other governmental agencies on matters concerning air defense systems. Organizational divisions act as entities in discharging these functions.

Asst. Chief of Staff, Intelligence

Maj. Gen. M. Lewis

ACS/Intelligence utilizes five major subdivisions in his office to carry out his intelligence function. A Policy and Management group develops and implements USAF intelligence plans and policies. An Electronics Intelligence Coordinating group directs, guides and coordinates all ELINT activities of the Department of Defense; provides advice to CIA and technical support to the Department of State and other representatives of the U.S.; provides technical representation for DOD in ELINT activities.

A directorate of Collection and Dissemination directs collection of air intelligence information; operates Air Attache system; determines reconnaissance mapping and charting and geodetic requirements; produces photo intelligence; receives, processes, disseminates, and maintains a document repository of all intelligence information; is Department of the Air Force contact point for foreign government representatives in the United States.

The ACS/I directorate of estimates contains four divisions. Topical division produces topical intelligence information and finished intelligence on a day-to-day basis; maintains world-wide surveillance for indications of hostilities; exploits all potentials for intelligence action; publishes the Air Intelligence Digest. The Integration division assembles finished intelligence to meet requirements received from the Air Staff, the Secretaries of the Air Force and Navy, the Army, other agencies and subordinate commands. Military Capabilities division, East, establishes and maintains continuing assessments, both present and future of the Sino-Soviet Bloc's ability to conduct air warfare; measures specific resource strength elements required by all agencies of the national intelligence community. Military Capabilities division, West, processes and evaluates new intelligence data; assembles intelligence studies in order to produce basic background intelligence, and primary studies on the air forces of certain foreign countries; establishes pertinent air intelligence requirements.

Targets directorate maintains a Target Analysis division which analyzes military, political, and economic strengths and resources world-wide from an air targeting point of view, develops target information and studies, prepares target materials, graphic and textual, on installations and complexes, publishes and maintains the *Bombing Encyclopedia;* a Physical Vulnerability division which determines the physical vulnerability of particular targets; estimates weapon requirements to obtain desired degrees of damage, and predicts the effects of specific weapons on targets; and a Target Materials division which determines requirements for air target materials, plans, coordinates, and monitors world-wide development, distribution and storage of air target materials.

Surgeon General

Maj. Gen. D. C. Ogle

The Surgeon General advises the Secretary of the Air Force and the Chief of Staff on all matters pertaining to the health of AF personnel, administers all medical services of the USAF, and advises the Asst. Secretary of Defense (Health and Medical) on USAF medical matters. His two assistants for Dental Services and for Veterinary Services develop service plans, policies and standards and provide technical supervision and professional guidance. There are three directorates in the office. The Director of Plans & Hospitalization is responsible for plans and operations, hospitalization, biometrics, facilities and manpower requirements, materiel, aeromedical evacuation, budget and fiscal programming and organization.

The Director of Medical Staffing & Education handles medical personnel utilization and selection, medical education and classification, career control, and military-civilian medical liaison. Director of Professional Services is responsible for aviation medicine, preventive medicine, medical consultants, physical standards, medical research.

Asst. Chief of Staff, Guided Missiles

Brig. Gen. C. M. McCorkle

The ACS/Guided Missiles advises and assists the Chief of Staff on all matters relating to guided missiles. He provides policy guidance, coordinates staff efforts, and monitors the overall planning and implementation of programs for guided missiles.

The office has four divisions. Three (air defense, strategic, and tactical) within their fields provide central control and direction of guided missile and associated activities, monitor all aspects of Air Staff endeavor in guided missile matters and provide policy guidance when appropriate, maintain cognizance of general status of Army, Navy and foreign countries' missile programs. The fourth, Ballistic Missiles division, provides central control and direction of ballistic missile programs; serves as central point of contact in Hq USAF for ballistic missile matters; serves as Secretariat of the AF Ballistic Missile Committee.

Directorate of Administrative Services

Col. J. L. Tarr

Until recently titled the Air Adjutant General's office, the Directorate is responsible for the publication of the orders and instructions of Hq, USAF; the administration within the AF of the postal service; the records administration program; the design, standardization, and procurement of AF forms; the procurement, printing, and distribution of AF publications; the providing of correspondence, mail, records, filing references, reproduction, and messenger services for Hq, USAF; and the maintenance and servicing of current personnel records of all USAF personnel on active service or retired.

Offices within the directorate include: Records Management group;

The Glacier breaking ice in McMurdo Sound. Mt. Erebus in background. (Official U.S. Navy Photo)

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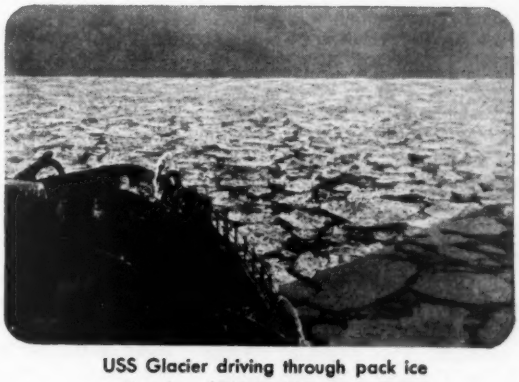
with an 8,600-ton blow!

To the Glacier, our Navy's largest and most powerful icebreaker, driving a path through ice up to 22 feet thick is all in the day's work. Here it is shown breaking a channel through 17 feet of solid ice at approximately 18 knots in Antarctica's McMurdo Sound as part of Operation Deep Freeze I and II. In view of the importance of communications at the bottom of the world, the Glacier is virtually a floating electronic laboratory. It contains nine **AN/SRR-13A** and seven **AN/SRR-11** radio receivers, as well as two **AN/SPA-YA** Range Azimuth Indicators, one on the bridge and the other in the **CIC**. All of this **RCA** equipment has given continuous and dependable service, unaffected by the tremendous shocks to ship and gear, as 21,000-horsepower engines send the ship crashing forward under conditions never before faced by any icebreaker.



USS Glacier driving through pack ice in Ross Sea. (Official U.S. Navy Photo)

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Postal and Courier Services group; Administrative division; Mail and Records Management division; Military Personnel Records division; Publishing division.

The Inspector General

Lt. Gen.
E. J. Rogers

The Inspector General is responsible for assisting the Chief of Staff, USAF, with special regard to evaluating and reporting upon state of readiness, effectiveness, and efficiency of the Air Force through the conduct of inspections, surveys, and investigations of AF activities and making recommendations pertinent thereto. The Inspector General is the responsible staff agency for handling all types of complaints and allegations. He exercises staff supervision over matters pertaining to the prevention of aircraft accidents. The Inspector General is responsible for investigations of major crimes, violations of public trust, personnel loyalty, and counterintelligence. He establishes policies concerning security and exercises staff supervision over Air Police, confinement and rehabilitation of prisoners, and the maintenance of discipline and censorship.

He performs these duties through the use of six directorates within his office, the titles of which are pretty self-explanatory: Director of Inspection Services; Director of Special Investigations; Provost Marshal; Director of Readiness and Materiel Inspection; Director of Procurement Inspection; and Director of Flight Safety Research.

Air Force Policy Council

Chaired by the Vice Chief of Staff, the AF Policy Council is made up of the Comptroller of the Air Force, the Inspector General, and the five Deputy Chiefs of Staff. The Assistant Chiefs of Staff for Guided Missiles, Intelligence, Reserve Forces, and Air Defense Systems also attend meetings whenever the council is considering items within their areas of reponsibility.

Primary duty of the council is to maintain surveillance of AF capability to carry out assigned missions. It examines major critical problem areas and recommends courses of action; reviews and recommends appropriate action on all major Air Force programs and objectives; provides AF Hq with program and policy guidance and performs other functions as directed by the Chief of Staff.

A Secretariat is maintained to review all matters referred to the council for completeness, context, and appropriateness; handles the paperwork of the council such as dissemination of information and preparation of the agenda. Four boards and committees provide advice and recommendations to the council. They are the Aircraft & Weapons board, a Program Status committee, an Air Force Installations board, and a Budget Advisory committee.

Asst. Chief of Staff, Reserve Forces

Maj. Gen.
R. A. Grussendorf

ACS/Reserve Forces assists and advises the Secretary of the Air Force and the Chief of Staff on all matters relating to Reserve components. He coordinates staff efforts and monitors the overall planning and implementation of programs for Reserve Forces. He is directly responsible for reserve affairs to the Chief of Staff, provides AF membership on the Reserve Forces Policy Board, OSD, and serves as focal point for liaison with nongovernmental organizations and associations having a primary interest in Reserve Forces.

Secretary of the Air Staff

Col. J. A. Brooks III

The Secretary of the Air Staff is responsible to the Assistant Vice Chief of Staff for matters pertaining to the internal administration and management of the Air Staff. He provides administrative programs and services necessary for efficient management of Air Staff resources.

The divisional breakdown of the office includes: AF Pictorial Art office; AF Museum Liaison office; Staff Protocol & Visitors Reception; and divisions for Staff Management, Staff Civilian Personnel, Staff Services, Staff Message, and Staff Presentation Support.

The Judge Advocate General

Maj. Gen.
R. C. Harmon

The JAG, USAF, acts as legal adviser to the Chief of Staff, exercises general supervision over the administration of military justice, and is responsible for the establishment and operation of the legal system of appellate reviews of courts-martial records as provided by the Uniform Code of Military Justice. Office has a Special Activities group (which conducts staff studies and furnishes central research and precedents services to the staff, prepares and edits JAG publications and papers), and directorates of Military Justice, and Civil Law.

Scientific Advisory Board

Chairman: J. H. Doolittle

Military director: Lt. Gen. D. L. Putt

The Board performs consultative services pertaining to scientific matters related to the fulfillment of the AF mission. The members, selected from various technological and scientific fields, constitute an advisory and consultant body which reviews research and technological developments with a view toward possible further development for military application. The Board also reviews and evaluates the AF long-range plans for R&D, the adequacy of laboratory and testing facilities, and the personnel policies affecting R&D activities.

Major Commands

Air Materiel Command—Gen. Edwin W. Rawlings; **Air Proving Ground Command**—Maj. Gen. R. W. Burns; **Air Research and Development Command**—Lt. Gen. S. E. Anderson; **Air Training Command**—Lt. Gen. C. T. Myers; **Continental Air Command**—Lt. Gen. W. E. Hall; **Military Air Transport Service**—Lt. Gen. Joseph Smith; **Strategic Air Command**—Gen. Thomas S. Power; **Tactical Air Command**—Gen. O. P. Weyland; **Alaskan Air Command**—Lt. Gen. F. A. Armstrong; **Caribbean Air Command**—Maj. Gen. T. H. Landon; **USAF Europe**—Gen. F. F. Everest; **Air University**—Lt. Gen. Dean C. Strother; **Headquarters Command**—Maj. Gen. R. C. Hood, Jr.; **Air Defense Command**—Lt. Gen. Joseph H. Atkinson; **North American Air Defense Command**—Gen. Earle E. Partridge; **Pacific Air Forces**—Gen. Laurence Kuter.

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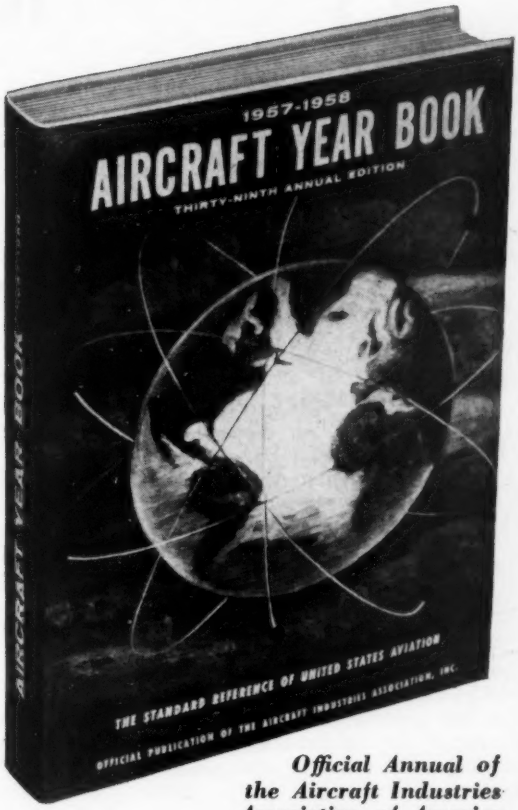
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Deputy Chief of Staff

DEVELOPMENT

Lt. Gen. D. L. Putt

A major command for research and development and a Deputy Chief of Staff in Headquarters, USAF, for the same purpose were set up in 1951. These separate agencies were created to insure that the struggle for technical superiority was not lost in the day-to-day business of running the Air Force.

An improvised thumbnail description of DCS/D's mission would properly include four primary functions: first, the establishment of Air Force qualitative requirements; second, general management of AF research and development activities; third, justification of R&D dollar expenditures; and fourth, to serve as a technical advisor to and representative of the Air Staff.

Requirements

To begin with, it is somewhat misleading to say that DCS/D alone establishes requirements. The office gathers information, formalizes it, and evaluates the statement of need against science's ability to meet it in an acceptable time period. Requirements can start with a scientific breakthrough, a desire for increased capability, an idea, or a recognized deficiency in existing equipment. Some requirements are generated in the Hq, USAF Air Staff; many more come from the using agencies. The actual preparation of a formal requirement is a careful, calculated procedure aimed at insuring that the very best Air Force thinking is contained therein. The procedure requires publishing first a draft requirement and circulating it Air Force-wide for coordination before issuing a formal requirement. Then, only after evaluating comments, facts, opinion, and technical state-of-the-art, and considering many other factors, is a formal Requirement issued.

One example of a requirement generated by a need for increased capability is that of the air-to-surface missile. The advantage of an ASM is obvious—the bomber does not have to fly over a heavily defended target to attack it. Recently, the AF decided to increase the B-52 potential by giving it such a capability. In this particular instance, they had to choose between improving an existing missile or developing a new one. The Air Force already had the Bell RASCAL-B-47 combination, after evaluating the growth potential of the RASCAL, they decided to develop a completely new ASM for the B-52 and other aircraft. In August, a contract was awarded North American for just that purpose.

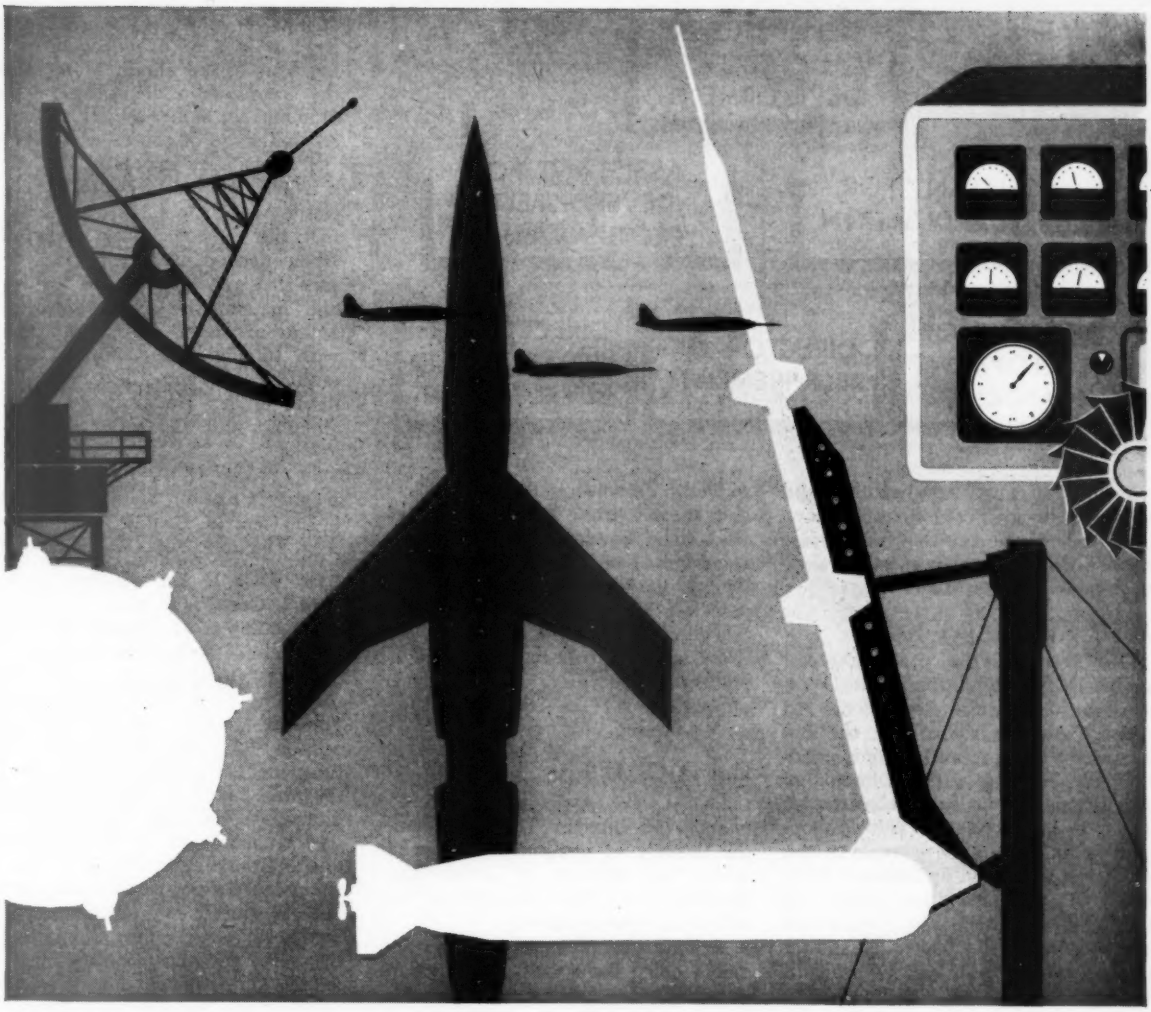
Another example of a requirement—this one generated by a recognized existing deficiency—pertains to automation in air defense systems. Projecting thinking ahead a few years to the era of ballistic missiles points up the problem.

If the Air Force detects a missile 1000 miles beyond a radar site in the far north, which in turn is 1000 miles from the target—Washington, in this hypothetical case—they then have approximately five minutes to identify the missile as hostile, predict its impact point, alert and launch defense missiles and destroy it at a safe distance from the target. Existing equipment does not have that capability; thus, a new requirement is created for a complete air defense warfare system with automatic data processing.

Management, of course, actually consists of very broad and general supervision of ARDC since that command handles the projects on a day-to-day basis. The Air Research and Development Command, in turn, supervises nine Air Force R&D centers which work with more than 160 educational institutions and 1600 industrial organizations. At the DCS/D level in Hq USAF, one major problem is the maintenance of a proper balance between the development of specific weapons for the inventory, and the accomplishment of basic and applied research for future yet unidentified weapons. Frequently, it is hard to justify the performance of some basic research task which may or may not result in a specific weapon. However, an example of payoff from good management of the basic research program is the MB-1 GENIE rocket.

Last February, then-Secretary of Defense Wilson announced that nuclear air defense weapons had been developed and were being introduced into the air defense system. He was referring, of course, to the MB-1.

The GENIE was developed on a high-priority basis by the Air Force in the amazingly short period of slightly over two years. This effort included simultaneous development of the rocket and the warhead, and aircraft and fire control modifications. However, this program could not have been successfully completed in so short a time without many less glamorous efforts in prior research programs. The expenditures for basic research which were directly applicable to the timely completion of this project can be traced back as far as 1946. For example, propulsion investigation at the Wright Air Development Center in '52 and '53 provided solutions to thrust fluctuations in rocket motors. For an



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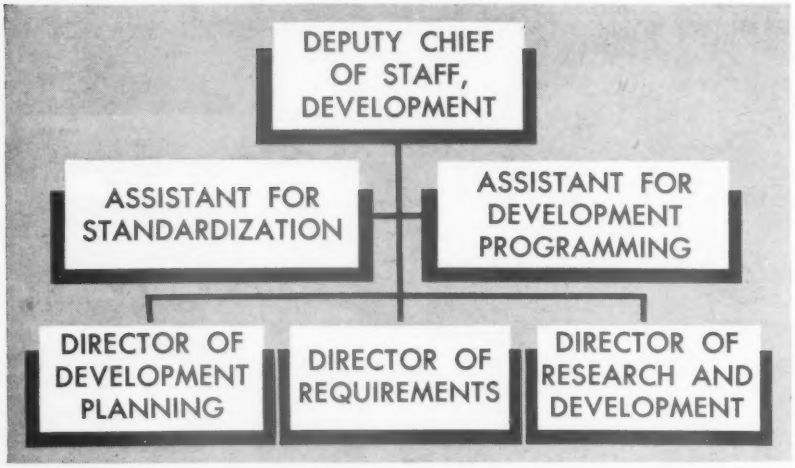
DEPUTY CHIEF OF STAFF, DEVELOPMENT
ASSISTANT FOR STANDARDIZATION
ASSISTANT FOR DEVELOPMENT PROGRAMMING
DIRECTOR OF DEVELOPMENT PLANNING
DIRECTOR OF REQUIREMENTS
DIRECTOR OF RESEARCH AND DEVELOPMENT

investment of a few hundred thousand dollars, a stockpile of scientific know-how was accumulated which made possible the remarkably short development period of the MB-1.

Dollar Justification

DCS/D assists the USAF Director of the Budget in justifying R&D expenditures to the Secretary of the Air Force, Secretary of Defense, the Bureau of the Budget, and Congress. Additionally, it assists the Director of Installations in justifying construction of new technical research and development facilities. A good example of this is a rocket test stand at Edwards AFB, built at a cost of 3 million dollars.

This is a test facility for large rocket engines of the type which will power the intercontinental ballistic missile. It may seem peculiar that the Air Force would construct a rocket test stand for this purpose at Edwards since the missiles are neither constructed nor flown from that site. However, the justification was quite proper in view of the relatively close proximity to the manufacturer, yet safely isolated from civilian concentrations, and location on government land where sufficient power and cooling water were available.

A final primary function of DCS/Development is to act as technical advisor to and representative of the Air Force. As technical representative of the Air Force, one principal duty is coordination of the Army, Navy, and Air Force R&D programs under the guidance of the Secretary of Defense. The VTOL (vertical take-off and landing a/c) investigations are an excellent example of triservice coordination. Quite naturally, all services have a great deal of interest in this capability. The Navy developed two turboprop VTOL's, and the Air Force developed a pure jet VTOL—the Ryan X-13, whose capability was recently publicly demonstrated in a take-off and landing from the Pentagon Boat Dock area. Incidentally, its flight path from the Pentagon to the Masonic Temple in Alexandria, Va., traced the path of the Air Corps' first airplane 50 years before. Simultaneously the Army has been concentrating on flying platforms, helicopters, and short take-off—called STOL—conventional aircraft.

How DCS/D Fits

DCS/D has four major staff elements: the director of requirements, the director of research and development, the director of development planning, and the assistant for development programming.

As indicated previously, the requirements office formalizes Air Force requirements for systems and items for the operational inventory. The director of R&D supervises all ARDC test and development activities and keeps quite close scrutiny of the basic research and technical development programs. The director of development planning looks 10 or more years into the future for the state-of-the-art trends and makes special evaluations of all kinds. Additionally, he manages activities of The Rand Corporation—a civilian firm in California which helps the Air Force evaluate many R&D and operational problems. The assistant for development programming is primarily concerned with resources control and administration.

R&D Important

It is interesting to observe throughout the history of war how a new item has so many times influenced the outcome of a war. Each new finding of any importance has altered the way in which future wars are fought and usually has resulted in the finder winning the war at hand. For example, the introduction of the long bow virtually put the knight out of business as a major war weapon and gave the English victory over the French in the War of the Roses. More recently, the introduction of nuclear weapons dramatically ended WWII and changed the shape of future wars.

If R&D were important in the past, it is even more so now. DCS/D works closely with Operations to determine that the right weapons are available when needed, with Materiel to insure that new weapons are producable and maintainable; with Personnel to obtain the right skills when needed; with Intelligence for inputs into our requirements; with the Comptroller to insure dollars are available, and with all other staff elements.

Organization

Deputy Chief of Staff, Development: Lt. Gen. D. L. Putt

Asst. Deputy: Maj. Gen. J. S. Mills

Asst. DCS/D for Nuclear Systems: Maj. Gen. D. J. Keirn

The Special Assistant for Nuclear Development advises the Deputy Chief of Staff, Development on all matters pertaining to the Atomic Energy Program except the Aircraft Nuclear Propulsion Program. His specific functions include maintaining liaison with the other services, joint agencies, Department of Defense, Air Staff and major commands on matters pertaining to the atomic energy research and development effort; serving as principal DCS/D adviser to Air Force members of the Military Liaison Committee, to the AEC, and the Coordinating Committee on Atomic Energy, OASD (R&E); and serving as a mandatory coordination office on all DCS/D staff actions concerning the Atomic Energy R&D Program.

Executive: Lt. Col. J. R. Finton

Asst. for Security: J. J. Liebling

Asst. for Special Projects: Col. R. J. Nunziato

The primary responsibility of the Office of Assistant for Special Projects is to assist and advise the Deputy Chief of Staff, Development and his assistant on all projects as assigned. There are two divisions of the office: Projects and Foreign Developments. Among the presently assigned responsibilities are surveillance over AGARD; MWDT; European Office, ARDC; SHAPE Air Defense Technical Center; Ballistic Missile Defense; Project Lincoln; Project Sun Tan; and WS-117L.

Assistant for Standardization: Col. W. R. Clingerman

Office has two divisions—domestic standardization, international standardization. The first division is responsible to supervise and formulate policy and

procedures for Air Force participation in the DOD standardization program and the AF specifications and standards program; exercises staff cognizance of the Aeronautical Standards Group and of the AF Advisor to the Chief, office of standardization, Assistant Secretary of Defense (S&L); provides Headquarters representation on the Council of Military Aircraft Standards. The second division formulates policy and establishes procedures for AF participation in international standardization; supervises and administers AF actions in the tripartite (U.S., U.K., Canada) and NATO standardization programs of the armies, navies and air forces; provides policy direction to the USAF member of the Air Board, Military Agency for Standardization, NATO; provides an office of record and staff support to the Air Force in its relations with the Air Standardization Coordinating Committee.

Assistant for Development Programming: Brig. Gen. W. L. Rogers

Program Funding div.: Col. S. S. Hunn

Branches—center operations, operational program, technical program. Programs funds for the research and development program. Reviews fund requirements for compliance with policies and guidance; maintains program funding data and makes analyses of program funding for R&D and R&D support programs; approves program funding adjustments necessary to meet technical requirements; participates with DCS/Materiel agencies in the development of R&D support program and the adjustments between this program and the R&D program.

Supporting Resources div.: Col. J. B. Williams

Branches—Aircraft missile and drones, facilities. Responsible for programming of aircraft missile and drones required in support of research and development and test programs and for the programming of technical and supporting facilities required for research and development activities.

Program Control div.: Lt. Col. B. M. Keith

Develops and analyzes programming procedures; maintains the DCS/Development program status room.

Director of Development Planning: Maj. Gen. L. S. Stranathan

Air Warfare Systems div.: Col. D. L. Kime

Participates with the Air Staff in formulating long range estimates, future strategy and operational concept; provides overall direction and team leadership in the preparation of DPOs and promulgates DPOs to appropriate USAF agencies.

Research and Analysis div.: L. W. Sieck

Formulates and recommends USAF research objectives and participates in the promulgation of approved objectives to appropriate USAF agencies; conducts technical analysis and evaluation as necessary in connection with the formulation of research objectives and development planning objectives; assists as appropriate in the evaluation of Rand studies and reports.

Director of Requirements: Maj. Gen. J. Ferguson

Executive Services group, an adjunct of this office, handles such responsibilities as requirements documentation, employment and suitability testing, modification programming, Secretary Aircraft and Weapons Board.

Air Defense div.: Col. M. L. Martin

Branches—weapons, aircraft control & warning.

Strategic Air div.: Col. W. C. Sipes, Jr.

Branches—aircraft, penetration systems, navigation & bombing, munitions.

Tactical Air div.: Col. J. M. McNabb

Branches—fighter, bomber & troop carrier, reconnaissance.

Supporting Commands div.: Col. T. B. Kennedy

Branches—military air transport & services, training systems.

Operational Support div.: Col. L. S. Beall

Branches—communications, equipment.

In general, the five divisions of Requirements listed above, in their respective fields, establish qualitative requirements for USAF and MAP weapons systems and their major components, and major items of equipment; establish modification programs for the above items; direct employment and suitability testing.

Director of Research and Development: Maj. Gen. R. P. Swofford, Jr.

Air Defense group: Col. C. B. Downer

Strategic Air group: Col. R. A. Berman

Supporting Services group: Col. A. T. Culbertson

Tactical Air group: Col. R. D. Hubbard

The four groups listed above, within the fields delineated by their titles, coordinate policy and implementing of actions in the management of the research and development program.

Aeronautics div.: Col. D. H. Heaton
Branches—aircraft, propulsion.

Combat Components div.: Col. G. M. McNeese
Branches—instrument, navigation & bombing; fire control & weapons; munitions.

Supporting Components div.: Col. F. L. Moore
Branches—communications radar & countermeasures, ground support equipment, photographic & reconnaissance.

Human factors div.: Col. C. H. Roadman
Branches—aviation medicine & personal protective equipment, personnel & training, human relations.

These four divisions of the R&D directorate have the responsibility for applied research in their respective fields—the first division, aeronautics and propulsion; the second, armament, fire control, navigation and special munitions; Supporting Components division in areas of communications, countermeasures, radar, ground support equipment and reconnaissance; the fourth division, human factors.

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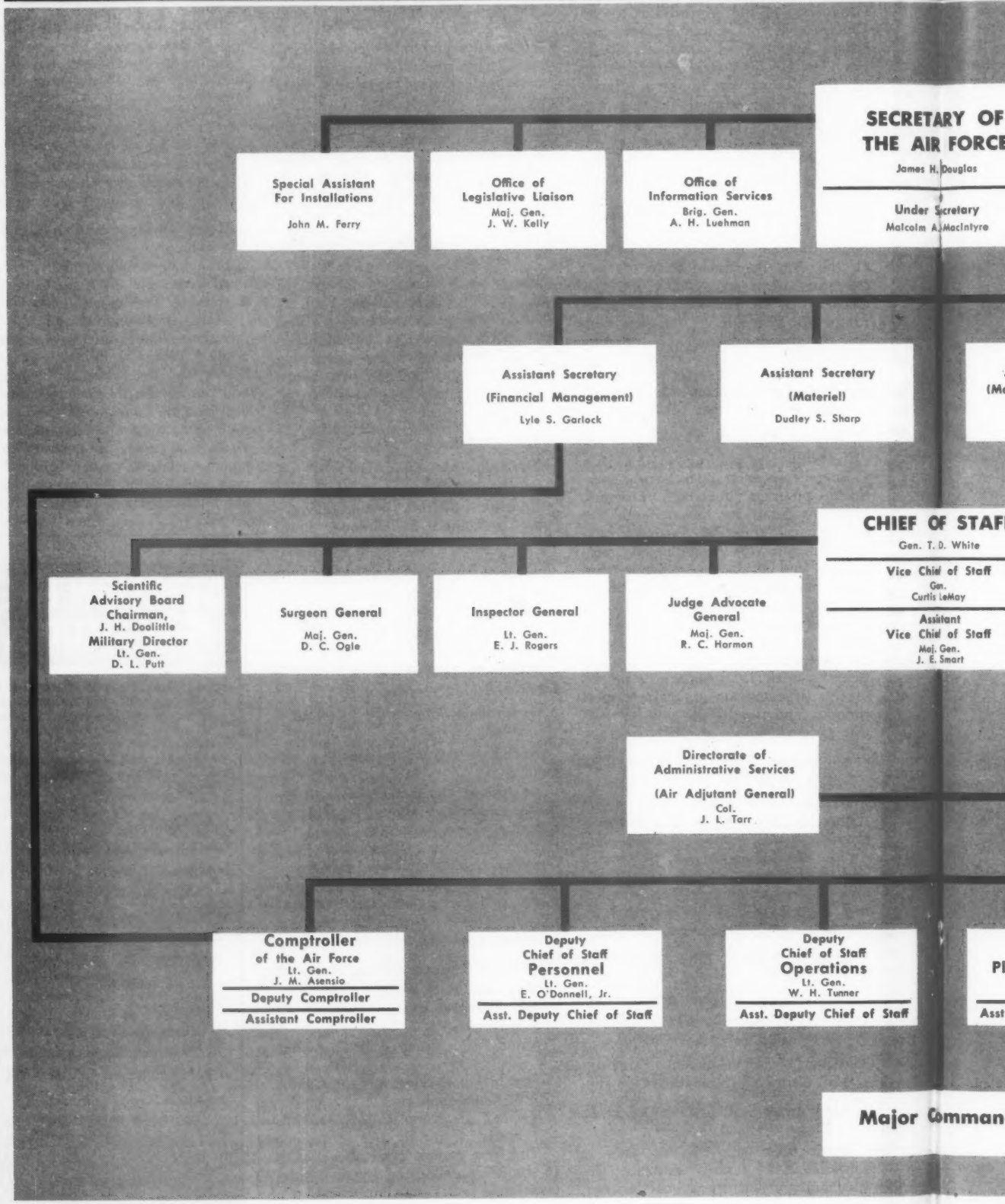

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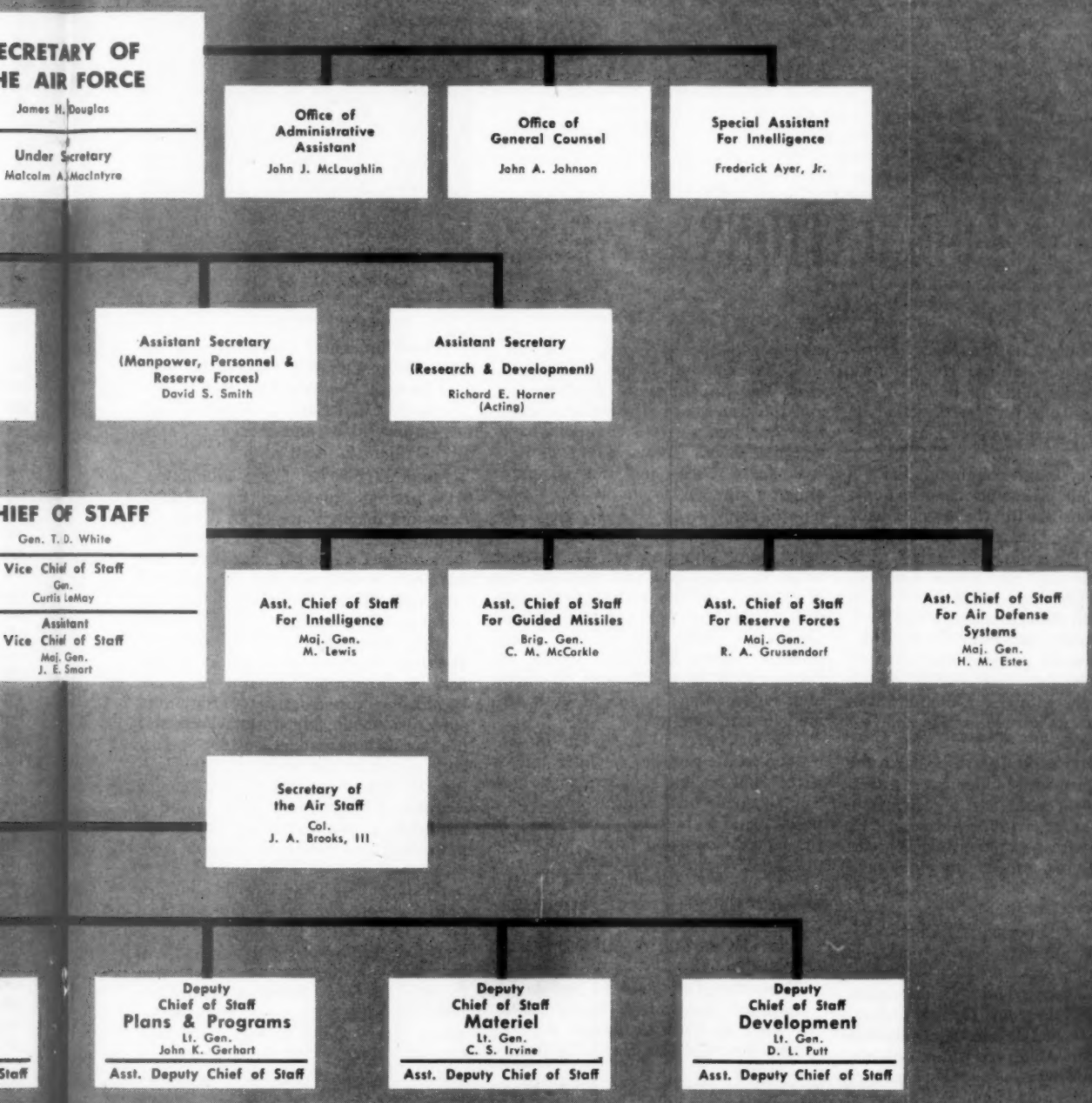
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Lt. Gen. D. L. Putt
Asst. Deputy Chief of Staff
ajor Commands

Deputy Chief of Staff

OPERATIONS

Lt. Gen. W. H. Tunner

THE Deputy Chief of Staff, Operations, is one of the six statutory deputies of the Chief of Staff, USAF. He is responsible for the direction of all U.S. Air Force air operations worldwide.

He reports to and respresents the AF Chief of Staff in operational functions. He is responsible for the execution of Strategic, Air Defense, and Tactical Plans and Programs. He serves as a member of the Air Force Council, which is the top military advisory group within Headquarters, USAF and, in this capacity, assists in the formulation of plans. In carrying out these responsibilities, he must work particularly closely with the DCS for Plans and Programs, for Materiel, and for Development.

He supervises and is responsible for six important and fundamental activities, Air Force-wide, and is responsible for their proper coordination with each other and with pertinent staff agencies and commands outside his own jurisdiction.

These activities are:

1. Atomic Energy. Monitors Air Force-wide interests and activities in this field.

2. Manpower and Organization. Develops requirements for and ceilings in personnel and develops organization to best utilize Air Force-wide resources.

3. Communications and Electronics. Monitors development, procurement, and allocation of communications systems and facilities for the Air Force world-wide.

4. Operations. Coordinates and directs the Air Force world-wide strategic, air defense, and tactical operations.

5. Operations Analysis. Develops, analyzes, and improves operational concepts for the Air Force.

6. Installations. Plans and supervises the procurement, development, and construction of all Air Force facilities, world-wide, from complete bases to paint shops.

Each of these activities is under either a director or an assistant who reports directly to DCS/O. Each requires close monitoring of the government funds allocated for the purpose so as to insure the best possible use of existing facilities and available personnel. In the field of installations alone, this dollar responsibility is impressive; when multiplied by all six functions, it is tremendous in scope and far-reaching in effect—both immediate and long-range.

The DCS/O is in direct line of succession to the position of Chief and/or Vice Chief of Staff. He maintains continuous operational control of Air Force units world-wide through facilities in the USAF Command Post.

Organization

Deputy Chief of Staff, Operations: Lt. Gen. William H. Tunner

Asst. DCS: Maj. Gen. Kenneth P. Bergquist

Executive: Col. Paul L. Steinle

Assistant for Atomic Energy: Maj. Gen. Richard T. Coiner, Jr.

Deputy: Col. Horace D. Aynesworth

Assistant for Logistics: Col. Alfred V. Vanhoozer

Assistant for Military Liaison Committee Matters: Lt. Col. Edward L. Corcoran

Air Force atomic energy program. Air Force representation on Military Liaison Committee, AEC.

Personnel and Administration Div.: Col. Richard L. Randolph, Chief

(Three branches: Personnel and Security: Lt. Col. Samuel C. Schlitzkus; Organization and Training: Col. Paul J. Slocum; Administration and Services: Maj. William G. Ard)

Monitors the Air Force atomic energy program to assure the development and maintenance of an Air Force organizational structure adequately manned and trained to accomplish the Air Force atomic mission. In coordination with DCS/P develops policy for and monitors selection, training, classification, assignment, and utilization of personnel required for support of the Air Force atomic energy program. Establishes procedures for obtaining access to atomic weapons stockpile and production information. Develops policy and procedures for access to AEC facilities by USAF personnel, and screens requests for visits to AEC facilities. Establishes policy and procedures for processing cases involving possible compromise of restricted data which occur within the USAF, and reviews all reported cases. Represents the Air Staff on policy matters governing the military classification of restricted data and provides classification review service for the Air Staff. Provides administrative and executive service for the Assistant for Atomic Energy, Air Staff control authority for the exchange of restricted data, and provides weapons-data index and restricted data library service for the Air Staff. Maintains office of record for AF atomic energy program.

Atomic Energy Div.: Col. Earl W. Kesling, Chief

(Two branches: Development and Logistics: Col. Gale W. Cleven; Operations: Col. Carlos D. Bonnot)

Advises and provides guidance to the Air Staff on Atomic Energy problems, including those associated with atomic warheads for guided missiles and aircraft rockets. Coordinates the activities of the DCS/O and monitors the activities of the Air Staff to a sufficient degree to insure uniform policy on atomic energy matters. Reviews Air Force and Joint Outline War Plans for alignment with Air Force atomic energy policies. Maintains liaison on atomic energy matters of concern to the Air Staff with agencies outside the Air Force. Coordinates Air Staff policy actions pertaining to atomic energy matters originating below the Deputy level.

Assistant for Operations Analysis: Dr. LeRoy A. Brothers

The Assistant for Operations Analysis is responsible for conducting scientific operations research studies with the objective of improving weapons, equipment, tactics, and strategy; and for monitoring the U.S. Air Force operations analysis program.

To accomplish these operations research studies, five teams are established as follows:

Atomic Warfare Team: Dr. Kenneth R. More
Combat Operations Team: Dr. Hugh J. Miser
Guided Missiles Team: John Intlekofer
Planning Analysis Team: Dr. Walter L. Deemer
Technical Liaison Team: Daniel Leivick

The Technical Liaison Team has the added responsibility of monitoring and coordinating the programs of all operations analysis offices and assists commands in their establishment of such offices.

Director of Installations:

Maj. Gen. Augustus M. Minton
Deputy Director: Brig. Gen. William E. Rentz
Executive: Lt. Col. Walter G. House

Directs military construction programs, facility maintenance, utilities service, family housing, construction operations, engineering and architectural services; real property acquisition, management, and disposal.

Deputy Director for Air Force Academy Construction Agency: Col. Albert E. Stoltz

Supervises and accomplishes those functions incident to the planning, design, construction and acceptance of real property facilities constituting the permanent Air Force Academy at Colorado Springs, Colorado.

This activity is located in Colorado Springs and is a field extension of the Directorate of Installations, Headquarters USAF.

Plans Analysis Group: Arlie C. Huffman

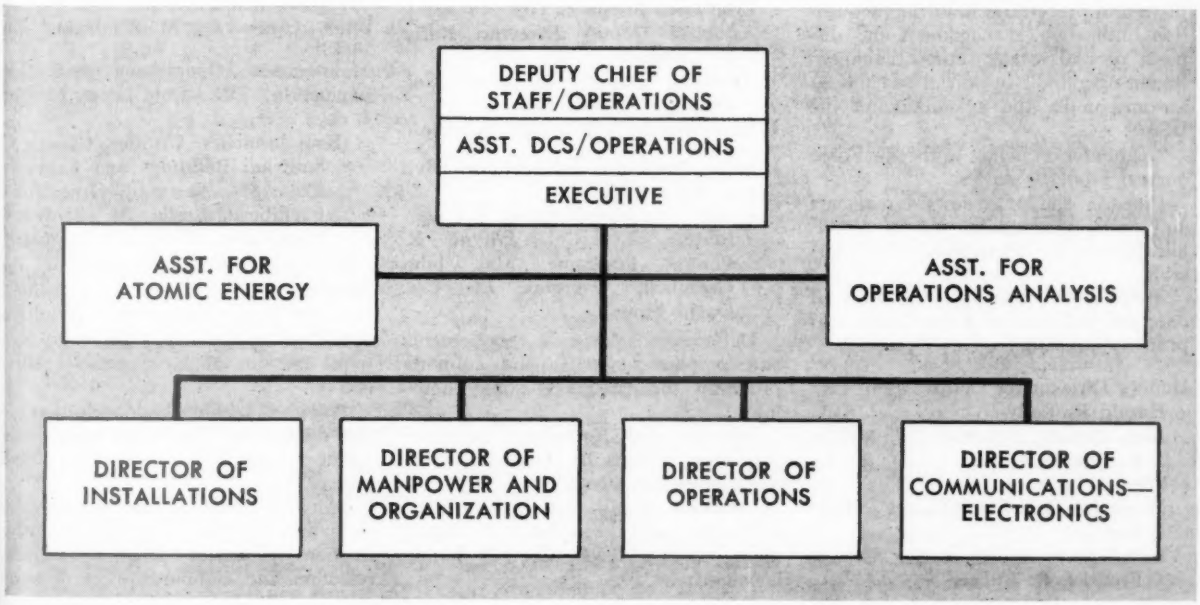
Analyzes and evaluates programs, systems and procedures involved in implementation of installations programs and determines relationships with each other and with Air Staff or other governmental agencies.

Develops and maintains control of an organized and integrated installations management system. Develops and maintains control of the application and utilization of machine accounting techniques to installations operations and procedures. Advises, correlates and provides graphic analysis, presentation and visual aid services for Director of Installations. Develops Installations portion of interservice and USAF war plans, emergency plans, recovery and restoration plans. Develops requirements, procedures and actions relative to Air Force oversea troop construction support to be furnished by the Department of the Army and serves as liaison with Department of Army on such matters.

Deputy Director for Real Property: Brig. Gen. Christian F. Dreyer
Associate Director: John R. Gibbens
Assistant Deputy Director: Col. Wilson H. Banks
Executive: Lt. Col. Wayne D. Dunn
Special Asst. for Reserve Facilities: Col. John B. Wilson
Special Asst. for Legislation: Murray Comarow

Air Base Planning Div.: Col. Maurice M. Simons
Deputy Chief: Col. Donald H. Fischer
Executive: Maj. Robert L. McGee
(Two branches: Master Planning, Lt. Col. Robert C. Stephany; Base Selection, Col. William A. McCarty)

Develops and promulgates policy and master planning criteria for the establishment and development of Air Force installations. Monitors the preparation of master plans for Air Force installations world-wide, and coordinates the master planning of industrial installations involving airfields, in which the Air Force has an interest. Monitors the selection of sites for Air Force installations. Plans, develops, directs and



approves development programs for the Air Force installations. Monitors the Air Force access roads program.

Programs Division: Col. David E. Kunkel, Jr.
Deputy Chief: Henry F. Ulinski
Military Asst.: Col. Edgar R. Jackson
Executive: Maj. James M. Baxter
Special Asst. for Guided Missiles: Robert P. McGowan
(Four branches: Procedures and Control, Robert H. Jensen; Zone of Interior, Lt. Col. Robert W. Fuller; Overseas, Lt. Col. Bert E. Pettit; Criteria and Requirements, Lt. Col. Harold W. Richardson)

Establishes, develops and issues Air Force military construction programming guidance. Forecasts, initiates, develops, validates and defends Air Force military construction programs. Monitors development and issuance of criteria and functional requirements for Air Base facilities required in support of current and projected Air Force missions. Procures, assembles and develops costs on existing and proposed Air Force installations in support of projected or assigned base missions.

Real Estate Division: Col. Thomas H. Garrett
Deputy Chief: Donald L. Black
Executive: Maj. Norris W. Hamilton
(Four branches: Realty Management, Col. Wilson Ralston; Inventory and Documents, Col. Marshall C. Edenfield; Zone of Interior Realty, Col. Kenneth J. Payne; Overseas Realty, Lt. Col. Delynn E. Anderson)

Establishes and monitors policies, plans and procedures involving acquisition, utilization, management and disposal of real estate (other than contractor-operated industrial facilities) for and under the jurisdiction of the USAF.

Negotiates on behalf of the Air Force on real property matters.

Prepares and/or reviews agreements and issues permits for use of USAF installations by other than USAF aircraft.

Monitors collection and assembly of data and publication of the USAF real property inventory.

Deputy Director for Construction: Col. Harold K. Kelly
Asst. Deputy Director: Col. Melvin T. Edmonds
Special Assistant: John H. Lee
Executive: Lt. Col. Dana F. Hurlburt
Installations Representative Group: Fredrick R. Kubert

Engineering Division: Col. Simon M. Lutz
Deputy Chief: Claude W. Harris
(Three branches: Standards, Lt. Col. Temple A. Tucker; Architectural, Lt. Col. William H. Lillie; Engineering, Col. William D. Alexander)

Provides engineering and architectural services.

Initiates and monitors projects for the investigation of new engineering design and construction principles for use in the design and construction of AF facilities.

Prepares technical manuals, directives, standard plans, working drawings, specifications and cost estimates for all types of Air Force buildings and structures including visual aids to navigation.

Monitors the use of architect-engineer services by the Air Force.

Construction Division: Col. Colie Houck
Deputy Chief: Linwood B. McCloud
(Four branches: Zone of Interior, Col. Roscoe G. Rector; Construction Program and Status, Clarence E. Guerin; Overseas, Col. James H. Courtney; Special Projects, Col. Clifford B. Olson)

Monitors execution of the Air Force military construction program.

Obtains post authorization (other than real estate) and fiscal clearances for obligation of Air Force public works funds.

Monitors Air Force public works apportionment actions and records allocation of public works funds.

Provides and monitors construction progress reports.

Deputy Director for Facilities Support: Brig. Gen. Joseph E. Gill
Associate Deputy Director: Rufus L. Crockett
Assistant Deputy Director: Col. Donald F. Lehnhard
Executive: Maj. Irving W. Haberle

Housing Programs and Contract Div.: Col. Robert Mitchell
(Three branches: Contract and Legislative, Lt. Col. Wayne R. Pipher; Programs, Maj. John Campbell; Overseas, Lt. Col. David Stone)

Determines worldwide requirements and prepares, submits and supports programs for Air Force family housing.

Initiates and formulates proposed legislation actions to meet Air Force housing requirements.

Develops legal and management techniques and procedures to implement existing laws effecting family housing.

Monitors programs for the construction of family housing in overseas areas under the surplus commodity plan and the rental guarantee plan.

Monitors programs for the rental, rehabilitation or disposal of existing inadequate public quarters.

Wherry Acquisition Group: Lt. Col. James B. Porter

Develops and implements procedures utilized in the acquisition and improvement of Wherry Family Housing.

Formulates criteria for evaluating Wherry Housing to qualify as government quarters.

Assists in defense of Wherry Family Housing acquisition before higher echelons in the Air Force and the Congress.

Housing Construction Div.: Col. Guy H. Goddard
(Three branches: Architectural, Leon Julius; Engineering, Col. James M. Waddell; Operations, Lt. Col. Joseph Campbell)

Establishes and issues policies and procedures for the design and construction of all Air Force family housing in the ZI and overseas possessions.

Develops and establishes engineering design criteria and standards, and guide specifications for Air Force family housing units.

Issues design directives authorizing procurement of architect-engineer services for development of family housing projects.

Establishes policies and procedures for management of appropriated funds utilized in support of the Capehart Housing Program.

Programs funds for mortgage payments on Capehart projects.

Prepares financial plans and manage funds required for MCP housing.

Maintenance Operational and Engineering Div.: Col. James F. Carney
(Four branches: Utilities, George C. Sullivan; Buildings and Grounds, Ernest M. Newman; Operational Facilities, Leslie B. Crowley; Equipment, Thomas J. Buntin)

Provides staff supervision over the maintenance, major repair, modification and minor construction activities, operation of utilities plants and systems and provision of utilities services.

Provides technical consultation in the defense of the major repair and minor construction program and budget.

Provides direction and guidance in shop and equipment layout and production processes and techniques, selection and standardization of shop

equipment, grounds improvement, control of pests and wood preservation.

Coordinates and recommends T/O&E and T/As and appropriate augmentation lists, pertaining to installation engineer organization.

Serves as focal point for the Directorate of Installations in matters pertaining to the development, testing, procurement and utilization of engineer-type construction and base maintenance equipment.

Maintenance Support Div.: Col. Edwin Eads

(Three branches: Programs and Projects Control, Lt. Col. Cyril E. Nichols; Systems and Procedures, Lt. Col. Alfred F. Vogler; Fire Protection and Aircraft Rescue, Lt. Col. Joel H. Yates)

Formulates policies, organization, procedures, criteria, and standards related to the maintenance and the management of maintenance of all Air Force real property.

Responsible for the review, clearance and control of maintenance, alteration, repair, and minor construction programs and projects.

Reviews, evaluates and assists in the defense of financial plans, budgets and programming in the major repair and minor construction area; monitors the development and implementation of cost engineering and real propery accounting.

Responsible for the direction and coordination of installations engineer conservation, management improvement, organization, methods and procedures, training, manpower requirements and utilization, and preventive maintenance.

Develops policy and procedures and provides supervision and guidance of the Air Force fire protection and aircraft rescue program, including all phases of functional fire protection engineering, fire prevention and on-the-ground fire fighting and rescue services.

Directorate of Manpower and Organization:

Maj. Gen. Thomas C. Musgrave, Jr.
Deputy Director: Maj. Gen. Thomas J. Gent, Jr.
Executive: Maj. Lloyd F. Haug

Directs manpower programs, manpower allocations, manpower requirements, organization, management engineering, management improvement.

Manpower Programs and Requirements Div., Col. Rollen H. Anthis
Deputy Chief: Col. Sherman F. Martin
Deputy Chief: Madison B. Smith
(Two branches and one group: Manpower Programs & Allocations Branch, Col. Cyrus J. Lemmon; Manpower Requirements Branch, Col. Wilson B. Williams; Statistical Analysis and Reports Group, Frank W. Bradley)

Develops and monitors military and civilian manpower plans and programs for: (*a.*) Current USAF operations (*b.*) Projected operational concepts (*c.*) War Plans.

Participates in regular and special budget and planning exercises in determining manpower costs and capabilities.

Integrates contract technical services programs with regular manpower program.

Justifies military and civilian manpower strength requirements before Office of the Secretary of Defense, Bureau of the Budget and Congressional Committees.

Distributes available manpower strength authorizations to commands by grade and budget category based upon analysis of command requirements.

Publishes and maintains organization tables, manning criteria and distribution guides (by function, grade and skill). Provides manpower data for use in planning requirements.

Evaluates command utilization of manpower resources by function.

Records and maintains data on USAF manpower requirements, availabilities and authorizations. Provides data, analyses and reports to other agencies as required.

Organization Div.: Col. William T. Seawell
Deputy Chief: Col. Owen G. Birtwistle
(Two branches: Management Engineering & Improvement Branch, Col. Harry C. Harvey; Organization Branch, Col. James F. Mears)

Develops USAF organizational doctrine and policy. Insures that all missions are assigned and coordinates on command mission directives. Conducts long-range planning. Conducts special studies pertaining to the operating and combat forces; the training and reserve forces; the supporting forces and other areas not specifically related to a particular command. Conducts studies and prepares reports generated by Congressional actions or agencies such as the Davis sub-committee.

Provides staff supervision for development of management engineering capability and the necessary tools and techniques to assure the improvement of Air Force systems.

Develops management improvement policy. Monitors the management improvement program. Provides guidance on manpower/management education and training.

Develops policy on use of contract services affecting manpower programs. Formulates procedures for relating them to such programs. Processes requests for authority to procure the services of experts and consultants under Public Law 600. Reviews performance of management engineering firms.

Director of Operations:

Maj. Gen. Maurice A. Preston
Deputy: Brig. Gen. Frederick J. Sutterlin
Deputy: Col. Ronald F. Fallows
Executive Officer: Lt. Col. John A. Briggs

Directs unit control, unit training, USAF missions, CAA liaison, command post, operational capability, flight standards and procedures, ground and passive defense, reserve forces operations, base and aircraft utilization.

Reserve Forces Group: Col. Dean H. Eshelman; Col. Paul Fojtik

Monitors operational aspects of the Air Reserve forces program and advises the Director of Operations on all matters affecting the operational effectiveness of the Reserve Forces Units.

Command Post: Col. Joseph G. Russell
Deputy: Lt. Col. Jack L. Buckley
(Three branches: Operations, Lt. Col. George E. Tormoen; Plans, Lt. Col. John W. Lafko; Joint War Room Annex, Lt. Col. Ben L. Parker)

Provides continuous Hq USAF operations control. Maintains and operates Chief of Staff war room and joint war room annex (JWRA) facility. Prepares and initiates Hq USAF disaster plans. Monitors Emergency Air Staff Actions (EASA) program. Conducts Command Post special operations.

Operations Control Div.: Brig. Gen. John E. Dougherty
Deputy: Col. Chesley G. Peterson
Deputy: Col. G. H. Fulcher
Executive: Lt. Col. Grover Y. Greene
(Three branches: Bombardment, Col. Jerome Tarter; Fighter, Col. Benjamin S. Preston, Jr.; Reconnaissance, Col. Charles C. Andrews)

Develops, consolidates and reviews concepts, doctrines, plans and requirements for strategic, defense, tactical and reconnaissance aircraft and missile weapon systems. Develops ECM doctrines and concepts and insures implementation of ECM plans and programs. Provides operational guidance for aircraft control and warning plans and

programs. Monitors operational capabilities and status of Reserve and National Guard units. Reviews, coordinates and initiates quantitative and qualitative requirements for special training devices.

Monitors U.S. military program in Spain. Monitors USAF munitions program. Recommends priority for allocation of resources in support of aircraft and missile programs. Recommends activations, movements, exercises and maneuvers, and deployment of units. Establishes unit training standards and monitors unit training programs; evaluates combat capabilities and operational status of units. Monitors Air Force and joint exercises and maneuvers which involve fighter, bomber, and reconnaissance aircraft.

Establishes operational policy for and monitors Air Force participation in aerial demonstrations. Advises and provides assistance in the evaluation of overall USAF capability to implement emergency war plans and contingency plans.

Evaluates and recommends criteria for testing the operational feasibility of emergency war plans.

Operations Support Div.: Col. Bourne Adkison
Deputy: Col. William H. Delacey
Executive: Maj. Gordon H. Stafford
(Five branches: Services: Col. Howard E. Conklin; Transport: Col. Lopez J. Mantoux; Air Traffic and Control: Col. Lawrence S. Lightner; Photo and Cartography: Col. Robert R. Smith; Flight: Col. Harry J. Holt)

Insures fulfillment of Air Force requirements in procedures and facilities for the control of air traffic, air space utilization, and civil aviation coordination including ICAO. Formulates policies and procedures for noise abatement and hazards to flight, flight standards and procedures including AF wide accident programs; prepares and monitors general flying regulations and flight information publications.

Plans and programs for USAF missions and commissions in Latin America.

Develops, consolidates and reviews concepts, doctrine, plans and requirements and implements operating programs for support and service units, including photographic, cartographic, aerial survey, air transport and troop carrier, ferrying, mission support, air weather service, air rescue service, air resupply, tow targets and drones; maintains current and projected capability, develops tactics and techniques, supervises activation, manning, equipping, training and deployment of these units; establishes unit training standards and maintains and publishes pertinent regulations and directives.

Establishes and coordinates Air Force policy and requirements on ground and passive defense.

Operations Programs Div.: Col. George R. Bickell
Deputy: Col. Bascome L. Neal
Executive: Maj. Charles M. Collins
(Four branches: Air Bases and Units: Col. William A. Lanford; Budget Requirements: Lt. Col. Edward L. Rathbun; Flying Time; Col. Richard P. Carr; Aircraft: Col. Howard F. Hugos)

Plans, programs, establishes and justifies base requirements and utilization including Air Force Reserve and National Guard.

Develops, implements and publishes program documents for: allocation of aircraft and guided missiles, flying hour, unit priorities, special weapons equipage and base utilization for USAF, AF Reserve, Air National Guard, and mutual defense assistance program.

Provides operational justification for the military construction program.

Correlates major air command operating and maintenance fund requirements with programs; justifies base maintenance and operations budget programs and provides collateral support in other budget program areas.

Develops planning factors for aircraft assignment and utilization.

Establishes and coordinates quantitative requirements and priorities for the Class V aircraft modification program.

Prepares real estate annexes for all war plans and analyzes base capabilities to meet planned requirements.

Compiles lists of and consolidates requirements for USAF installations and bombing, gunnery, rocketry and missile range utilization.

Formulates policies and procedures governing the movement, deployment, activiation and organization status changes of Air Force units.

Director of Communications-Electronics:

Maj. Gen. Alvin L. Pachynski
Deputy Director: Brig. Gen. Bernard M. Wootton
Executive: Lt. Col. Dean A. Voight

The Director of Communications-Electronics is responsible for communications systems, electronic systems, joint communications-electronics, the military affiliate radio system, and for providing technical supervision over the airways and air communication service.

Plans and Policies Div.: Chief, Col. Robert C. Sears
Coordinator JCEC: Lt. Col. Paul H. Long

Formulates and reviews policies and plans for Air Force communications-electronics.

Approves and monitors the development and implementation of the communications-electronics phase of the Mutual Defense Assistance Program (MDAP). Assigns radio frequencies to Air Force activities, and regulates utilization; serves as Air Force authority on all radio frequency matters.

Supervises and coordinates on matters pertaining to technical standards and training of communications-electronic personnel and units. Develops unit tables of organization and equipment for communications-electronics activities.

(Three branches: Plans: Col. Lawrence C. Sheetz; Frequency: Col. James D. Flashman; Programs and Standards: Col. Frank T. West)

Communications System Div.: Col. Wilbur W. Bailey

Determines and/or reviews the operational requirements for point-to-point communications systems, tactical and fixed radio and wire systems, and ground air radio stations, in accordance with current programs and projects.

Formulates and prescribes communications doctrine, methods and operating procedures for Air Force communications.

Exercises, under overall policy guidance of Director of Intelligence, staff supervision and technical direction over the Air Force security service on all matters pertaining to cryptography and communications security.

(Three branches: Procedures and Security: Col. Robert D. Gibson; Systems Engineering: Lt. Col. Jamie L. Wicker; Systems Requirements: Lt. Col. Earl C. Humphres)

Electronics System Div.: Col. Ira F. Stinson

Provides technical guidance and advice for the planning and operation of navigation and air traffic control aids, aircraft control and warning, tactical air control, and electronics warfare systems.

Determines need for control and controls the issue of critical items required for specific electronics systems. Formulates and participates in determining doctrine for the utilization of electronics systems equipment.

(Three branches: Aircraft Control and Warning: Col. Robert T. Hosken; Navigational and Air Traffic Control Aids: Lt. Col. Elroy H. Schwarze; Electronic Warfare: Col. George E. Hunsucker)

Deputy Chief of Staff

PLANS AND PROGRAMS

Lt. Gen. John K. Gerhart

THE office of the Deputy Chief of Staff for Plans and Programs was established in July, 1957. Formerly an integral function of DCS/Operations, the office still maintains a close liaison with Operations in performing its duties.

A tremendous increase in both volume and importance in international politics and technological advances, however, required setting up a separate DCS entity for Plans and Programs. To be responsible for operations and all its related activities, as well as plans and programs, became too much for a single deputy to handle.

In greatly simplified terms, DSC/Plans and Programs is responsible for Air Force planning for the future, permitting DCS/Operations to devote his time to current operations—a necessity of growing urgency.

The new office's importance in the Air Staff picture, its function as Air Force focal point for Joint Chiefs of Staff matters, its role when attending JCS meetings can best be pointed up by a description of the office.

Organization

Deputy Chief of Staff, Plans & Programs: Lt. Gen. J. K. Gerhart

Asst. for National Security Council Affairs: Col. R. J. Dixon

Monitors Air Force activities involving NSC and Operations Coordinating Board affairs. Acts as USAF advisor to the NSC Planning Board assistants and to the Department of Defense director of OCB affairs. Monitors support of Air Force members of the Armed Forces Policy Council.

Asst. for Long Range Objectives: Col. J. B. Tipton

Provides a basis for Air Staff planning consistent with and oriented toward the period beyond the Air Force program cycle. Develops, collates and supervises studies on research, analysis, and evaluation of military factors used in the formulation of long-range Air Force objectives and concepts. Collects, reviews and establishes basic strategic guidance ten to fifteen years into the future in the light of progress in technology, research and development, operations, materiel, intelligence, and the military aspects of national policy. Provides long-range guidance on force structure relative to progress in weapon development and projection of requirements for force levels, capabilities and resources.

Asst. for Western Hemisphere Affairs: Maj. Gen. T. C. Dorcy

Provides the focal point within the Air Staff for coordination of all matters pertaining to Canadian and Latin American affairs. Represents the USAF on the following joint agencies with Canada and Latin American countries:

- Permanent Joint Board on Defense, Canada-United States (PJBD)
- Military Study Group, Canada-United States (MSG)
- Inter-American Defense Board (IADB)
- Joint Brazil-United States Defense Commission (JBUSDC)
- Joint Mexican-United States Defense Commission (JMUSDC)

Director of Plans: Maj. Gen. J. B. Cary

War Plans div.: Brig. Gen. H. T. Wheless

Branches—joint plans, unilateral plans, strategic studies, combined plans, weapons plans. Prepares USAF war plans, and provides the Air Staff position on joint and combined war planning matters with other nations. Reviews war plans of commands under the JCS; provides strategic guidance stemming from war plans (including concepts, deployments, force requirements, command structures) to Air Staff agencies and to the AF members of joint, combined, interdepartmental and international committees and bodies. Develops short- and long-range strategic plans, concepts, analyses and war requirements; makes strategic studies as necessary to provide a basis for war planning activities; maintains liaison with major air commands and joint and international bodies in connection with war planning matters.

Policy div.: Col. H. C. Huglin

Branches—international, air policy. Reviews and recommends action on military considerations involved in political decisions and proposals by other agencies of the U.S. government; provides general staff supervision over activities pertaining to Joint Action Armed Forces. Provides working guidance on politico-military matters to AF members of joint, combined, interdepartmental and international committees and bodies; reviews and recommends action or provides policy guidance on matters pertaining to civil aviation, interservice functions, interpretations of joint doctrines, legislative proposals and Congressional inquiries. Establishes Air Staff policy on biological and chemical warfare; maintains liaison with civil governmental agencies, and appropriate groups outside the government, on the military

planning and policy aspects of national and international civil aviation. Advises on military rights necessary for implementation of strategic plans; initiates Air Staff action and provides support for requirements and negotiations for military rights in foreign countries. Maintains liaison with Department of State on politico-military matters.

Subsidiary Plans div.: Col. H. M. Pike

Branches—support operations, plans and policy. Develops, directs, and supervises psychological warfare and unconventional warfare plans & programs. Conducts necessary activities to carry out the responsibilities of the Chief of Staff as executive agent to the JCS for certain unconventional warfare matters; prepares psychological warfare and unconventional warfare annexes to AF war plans. Recommends establishment of requirements for equipment to implement psychological and unconventional warfare plans and programs; prepares programs to counteract hostile psychological warfare activities directed at USAF personnel; establishes requirements for psychological and unconventional warfare intelligence; conducts AF unilateral planning in all fields of interest. Represents USAF on interdepartmental boards and committees established to develop psychological operational policy and programs; initiates courses of action for peactime support of national psychological policy; provides policy guidance to the planning and operating agencies of the Air Staff.

Air Force Plans div.: Col. J. W. Newsome

Branches—plans development, plans publication. Develops the USAF schedule of wartime planning documents in support of the Joint Program for Planning; develops basic planning data and assumptions, force capabilities, wartime aircraft utilization factors, and wartime unit aircraft activity expressed in terms of wings and aircraft by base. Initiates and monitors the preparation and development of the following documents:

USAF Wartime Basic Plan (WPB)
USAF Mid-range Wartime Requirements Plan (WPR)
USAF Wartime Capabilities Plan (WPC)

Provides guidance to the Air Staff in the development of required material for planning documents; monitors the review made by the Air Staff and major commands of planning documents and initiates action when required; monitors the review of major AF command plans prepared in support of the USAF Wartime Capabilities Plan and the development of plans, policies and programs for Air Reserve Forces; reviews the strategic and operational guidance furnished by other agencies for wartime planning; is responsible for preparing and maintaining a current USAF Wartime Planning Manual.

Director of Programs: Brig. Gen. B. J. Webster

Programs & Procedures div.: Col. R. W. Fellows

Provides guidance and assumptions to the Air Staff for program development; monitors preparation, revision and implementation of USAF programs. Within the current program period, conducts analyses (1) to detect imbalances in approved programs as between resources and requirements; (2) to define the effects of proposed programs and changes; and (3) to determine required programming actions which result from program slippages, redeployments or other deviations; coordinates in the preparation of USAF military assistance program; analyzes, develops and establishes program procedures and techniques; controls publication and distribution of program documents and program data including the USAF military assistance program. Analyzes programs and proposed changes to assure proper consistency between programs of the active Air Force and those of the Reserve Forces.

Aircraft & Guided Missiles Programming div.: Col. W. K. Kincaid

Develops and reviews planning guidance, factors and standards for aircraft and guided missiles programming. Develops aircraft and guided missiles planning factors for the USAF military assistance program. Analyzes and reviews procurement, modification, modernization and disposal programs of aircraft and guided missiles for consistency with development programs, anticipated resources and other aircraft and missiles programs; analyzes the aircraft and guided missile procurement and modernization implications of proposed force structures. Consistent with actual or proposed budget, expenditure and other limitations; approved or proposed force structures; existing programs, and/or such other parameters as may be specified; develops program inventory and procurement requirements, objectives, and projections for aircraft, guided missiles, and missile ground support equipment.

Program Objectives div.: Col. L. R. Moore

Monitors the development of the USAF program objectives and establishes assumptions and guidance for their development to include:

(1) Participation in the development of force objectives, force priorities and the establishment of budget guidelines.

(2) Analysis of strategic guidance, long-range force objectives and continuous review of JCS, NSC and Air Force Council papers for concepts, policies and decision which affect the Air Force program objectives and their development.

(3) Evaluation of objectives prepared by various Air Staff agencies for balance, phasing and feasibility in relation to projected availability of resources, compatibility with Air Force strategy, policies, concepts and objectives, and for mutual harmony.

Establishes assumptions and guidelines, and monitors analyses of proposed plans and programs that project beyond the period of the current program; assembles factual and programmed data used in presenting and justifying budget estimates before review authorities, and accomplishes continuing analysis to insure consistency with the latest approved policies, programs and objectives of the Air Force.

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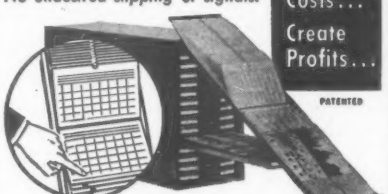

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Deputy Chief of Staff

MATERIEL

Lt. Gen. C. S. Irvine

THE logistics requirements of tomorrow's Air Force bears only a resemblance to existing requirements. They are not the same. Today, we are in a period of transition in the logistics business which requires us to support existing forces and prepare for the future at the same time.

The introduction of radically new weapon systems and the tremendous change in operational and strategic concepts of warfare rule out a "business as usual" approach. We are progressing so rapidly in the technology of warfare that our logistic systems must be kept under continuous surveillance. We must not try to simply up-date the systems to meet operational commitments. We have devised new logistics systems to replace the traditional ones so that we will be able to utilize our new weapon systems to their maximum capabilities.

The introduction of a new aircraft, for example, meant a possible increase in the length of a runway and the addition of specialized test and ground handling equipment. Generally speaking we were able to accommodate the new aircraft within existing facilities. The similarity among aircraft also permitted the retention of existing support arrangements, although some modernization was required and effected.

Missiles confront us with a radically new set of circumstances. Launching platforms, rather than runways are required. Missiles burn a different fuel than aircraft and the actions required to prepare for a mission are not comparable.

The development of high yield bombs and their availability for use by both sides in any future war makes vulnerability a particularly important consideration. To reduce vulnerability and to prepare for possible hostilities anywhere in the world, the element of mobility becomes increasingly important. Dispersion and hardening can be accomplished for missiles of all types, as well as manned air vehicles of present and projected design.

In achieving the tremendous strides in performance and effectiveness in the weapons of war, our materiel has become increasingly complex. Instruments are far more sensitive, tolerances more severe, quality and reliability more important. The traditional ability of field elements to service and maintain their own equipment is becoming more and more a thing of the past. Concurrently, the role of equipment manufacturers has become increasingly more important. The manufacturers not only provide technical specialists and assistance during the early period, but are becoming more and more involved in the maintenance, rework, and sometimes even resupply activities associated with their product.

During the initial period of nuclear war the logistics system will not be able to distribute materiel on hand to operating units in time for effective action. Huge stockpiles of materiel and full pipelines will no longer be as significant as they were in the past. The combat units must be capable of virtually instantaneous reaction in discharging their mission. This puts a severe strain on men and equipment alike. It changes the skill requirements as well as equipment requirements.

The task of materiel management is to be sure that the operational units are prepared for a war which may occur today and also lay the logistic foundation for a war which may occur tomorrow. For the foreseeable future, both aircraft and missiles will be in the active inventory. The security of our Nation depends on effective use of both, and the rapid introduction of new developments into our arsenal of weapons. Over the past few years logistics has become an increasingly important factor in preparing for the wartime conditions anticipated in the future.

The responsibility for operating the worldwide Air Force logistics system is vested in the Air Materiel Command with Headquarters at Wright-Patterson Air Force Base, Dayton, Ohio. Continuing effort is devoted to insuring that the Air Materiel Command is given the maximum possible delegation of operational authority. It is not necessary for the Air Materiel Command to go through USAF Headquarters on most operational matters in dealing with the other major commands. This permits the establishment of effective and close ties between AMC and the activities being supported *e.g.*, Strategic Air Command, Tactical Air Command, and Air Defense Command.

Illustrative of the steps constantly being taken to insure flexibility and consistency with changing logistic support needs is the establishment of the AMC Ballistic Missile Office. This Office at Los Angeles is a new addition to the Air Materiel Command. The office provides a concentration of Materiel management supervision in this all-important area, over and above the management responsibilities of the present eight major depots. The Ballistic Missile Office was organized and located at the Air Force Ballistic Missile Division, which is responsible for the research and development involved. In this manner an excellent working arrangement has been established to speed the transition from the research stage to production and to

insure maximum efficiency in the process. In addition, San Bernardino is being converted to a missile management depot, and will provide a logistic support center for the Ballistic Missile program.

Various management tools and controls have been established to provide the Deputy Chief of Staff, Materiel with the means for discharging his Air Staff responsibilities.

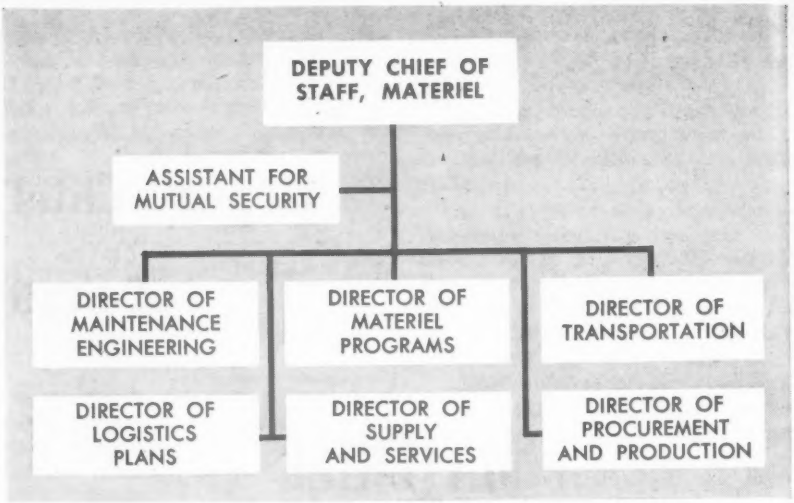
Utilizing the management-by-exception principle, controls and procedures have been designed to limit the number of items subjected to control and the frequency of reports. By controlling high dollar cost and high priority operational items, and utilizing broad dollar and program controls over the other items, it is feasible to exercise effective management control over the entire materiel activity.

Electronic data-processing equipment will facilitate the handling of the vast amounts of facts involved, and will improve the timeliness, adequacy, and accuracy of management-type reports. Some equipment is already in operation and more is programmed. Continuing study and research is underway to insure that the maximum benefit is derived from the use of this equipment for management purposes "and to make it more useful in the supersonic and hypersonic manned and unmanned air vehicle era."

To be fully effective, maximum delegation of authority and management-by-exception demands mutual understanding. A closely coordinated working relationship has been established between the Deputy Chief of Staff, Materiel and the Commander, Air Materiel Command. This same relationship has also been encouraged and extends to all levels in the two headquarters.

DCS/M Responsibility

Close coordination of materiel considerations and logistic capability with USAF programs and requirements is essential to insure the highest degree of military efficiency and strength of the Air Force in return for the large investment involved. The international situation, technological advances, production capabilities and lead times, availability of funds, strategic situations, diplomatic and political considerations are some of the many factors affecting materiel activity. Changes in force levels, fund or personnel limitations, international tensions and crises and scientific break throughs all have a significant impact on requirements. Expanding programs create shortages while shrinking programs generate excesses. The vital need to maintain qualitative superiority strains the system even further in forcing continuing modernization of the Air Force. Equipments have become more complex as performance has been increased and response times compressed.


DEPUTY CHIEF OF STAFF, MATERIEL
ASSISTANT FOR MUTUAL SECURITY
DIRECTOR OF MAINTENANCE ENGINEERING
DIRECTOR OF MATERIEL PROGRAMS
DIRECTOR OF TRANSPORTATION
DIRECTOR OF LOGISTICS PLANS
DIRECTOR OF SUPPLY AND SERVICES
DIRECTOR OF PROCUREMENT AND PRODUCTION

As the principal materiel officer, the Deputy Chief of Staff, Materiel must advise the Chief of Staff on all materiel matters and act for him in overseeing and properly managing the Air Force materiel activity. The Deputy Chief of Staff, Materiel has the responsibility of working with the other Deputy Chiefs of Staff, the office of the Secretary of the Air Force, and the office of the Secretary of Defense to insure adequate consideration of logistics matters in planning and programming. A close relationship must also be maintained with Congress and with industry. Congress provides the funds for building and maintaining the Air Force, and requires an accounting of our stewardship. Industry is the foundation on which the strength of the Air Force is built, providing us with the advanced designs and finished hardware which assure our air supremacy.

The office of the Deputy Chief of Staff, Materiel has been staffed and organized to provide for effective and enlightened management of the Air Force materiel activity in support of programmed peacetime and wartime missions.

We are on the threshold of startingly radical technological advances. The impact of tomorrow's changes will make the changes wrought by the substitution of jets for propeller-driven aircraft appear relatively insignificant. Imaginative thinking is being applied to the logistic area to keep ahead of these developments.

Organization

Deputy Chief of Staff, Materiel: Lt. Gen. C. S. Irvine

Asst. DCS: Maj. Gen. M. E. Bradley, Jr.

Asst. for Production Programming: Brig. Gen. W. A. Davis

Asst. for Materiel: J. S. Hoover

Asst. for Security: J. J. Liebling

Spec. Asst.: Lt. Col. J. D. Frye

Personnel Management Branch: Lt. Col. W. H. Gallienne

Asst. for Mutual Security: Maj. Gen. D. R. Hutchison

Deputy Asst.: Col. W. S. Steele

Plans and Policy Div.: Col. E. B. Young

Operations Div.: Col. D. W. Johnson

Organization & Training Div.: Col. H. G. Mumford

Evaluation Div.: F. E. Hume

Logistics Projects: Col. R. L. Thornton

Office is responsible for the Air Force Military Assistance Program. P&P division initiates broad programs, policies and requirements for the AF military assistance program. Operations monitors air staff actions involving scheduling and delivery of AF material under the MAP, provides detailed guidance, staff supervision, and operational advice to AF sections of military assistance advisory groups. Evaluation division evaluates program progress to determine status, deficiencies and effects on the AF military assistance program and insures that changes to approved MA programs receive current materiel documentation. O&T division monitors planning, programming and implementing phases of AF MA training programs, establishes qualifications and participates in the selection and indoctrination of AF personnel assigned to foreign military aid missions, serves as focal point for studies, briefs, and other USAF matters on joint MAP organizations, manning authorizations and requirements.

Director of Maintenance Engineering: Maj. Gen. A. G. Hewitt

Programs Development Group: Col. L. D. Van Mullem

Develops overall material maintenance-engineering and inservice modification plans to support AF current and mobilization plans and MA programs, evaluates the effectiveness of activities in performance of the material maintenance-engineering mission and establishes procedures to improve their management; reviews, and assists in justification of materiel maintenance-engineering and inservice modification budget and funding programs, translates policy into formal directives; coordinates the directorate review and approval of materiel maintenance-engineering organizational structures and attendant personnel, facility, equipment, training and career development requirements and authorization.

Armament Div.: Col. R. C. Lawrence

(Three branches: Bombing-Navigation Systems, Fire Control Systems, Guided Missiles)

Aircraft Div.: Col. G. E. Snell

(Three branches: Bombardment Aircraft, Fighter Aircraft, Cargo and Miscellaneous Aircraft)

Support Equipment Div.: Col. M. W. Johnson

(Two branches: Base & Missile Support Equipment, Aircraft Support Equipment)

The three divisions noted above, in their respective fields, establish policies for maintenance-engineering and inservice modification; originate, coordinate, and supervise equipment plans and programs in support of USAF current and mobilization planning; assure the submission of substantiated fund requests for inservice modification; provide staff assistance in the development and approval of maintenance-engineering organizational structures and attendant personnel, facility, equipment, training and career development requirements and authorization.

Communications & Electronics Div.: Col. G. G. Getz

Using two branches (Airborne Communications & Electronics, Ground Communications & Electronics), this division establishes policy for maintenance-engineering, installation and inservice modification of all communications and electronics equipment and systems; originates, coordinates and supervises equipment and systems maintenance engineering, installation-engineering, installation and inservice modification plans and programs; carries out other responsibilities within its field similar to those shown for the other divisions.

Director of Logistics Plans: Brig. Gen. L. B. Kelley

Systems Plans Div.: Col. G. S. Brewer

With two branches (Research and Analysis, Weapons Systems), this division initiates proposals designed to achieve long-range logistics objectives and reviews interim systems for long range logistic implications; initiates actions to attain long-range objectives and reviews progress; prepares logistic concepts for weapons systems, including manned aircraft, missiles, and support systems; makes logistic research available to directors and commands for their use; is responsible for materiel aspects of electronic data-processing systems.

Materiel Plans Div.: Col. H. H. Waller, Jr.

Office has two branches (War Plans, Materiel Management), provides logistics guidance for JCS strategic plans and concepts; participates in the development of USAF war plans; represents DCS/M in JCS and DOD studies of vulnerability of logistics operations; provides AF member on supply and logistics task group, emergency planning committee, OSD; responsible for overall materiel management matters for DCS/M; evaluates management systems, procedures, overall efficiency of management efforts in the materiel field and develops improved techniques; performs logistic capability and feasibility studies; insures appropriate DCS/M action on Inspector General and General Accounting Office reports, commission surveys.

Command Plans Div.: Col. D. W. Long

Overseas and continental U.S. branches evaluate logistics capabilities of each of the major commands to accomplish objectives established by USAF war plans; provides focal point for logistics problems submitted to Headquarters USAF by major AF commands, unified, specified and joint commands; serves as coordinating point within the Air Staff on logistics plans and policies in support of international agreements.

Director of Materiel Programs: Brig. Gen. D. Coupland

Program Guidance Div.: Col. C. C. Segrist

With two branches (Objectives & Guidance, Fiscal Policy & Analysis), division develops and issues policies and procedures affecting materiel requirements, funding and procurement planning; provides administrative

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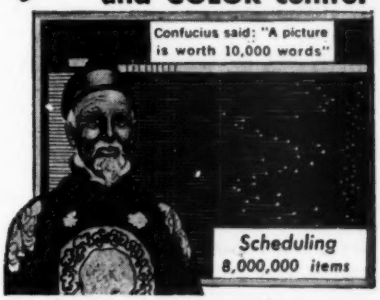

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planning for procurement programming matters; monitors the utilization and status of all materiel funds; serves as a focal point for preparation and defense of materiel estimates and buying programs.

Equipment Programs Div.: Col. H. R. Page

Using three branches (Support Equipment & Vehicle, Communications & Electronics, Ground Handling Equipment and Munitions), this office determines or directs determination of quantitative requirements for equipment procurement other than aircraft and accomplishes related procurement programming, budgeting (including justification to the Congress), and funding.

Aircraft and Missiles Div.: Col. J. P. Ferrey

Has four branches (Aircraft & Missiles, Fiscal, Modernization, Components); develops and maintains program surveillance over aircraft, missile, engine and component production and modification budgeting, (including Congressional justification) and funding, including MAP, Army, Navy and offshore procurement.

Industrial Readiness Div.: Lt. Col. S. Blatt

Formulates policy for and guides development of the Air Force industrial production readiness program.

Director of Supply and Services: Maj. Gen. C. J. Bondley

Plans & Programs Group: Col. A. Corwin

With three branches (Plans, Programs, Materiel Reserves Objectives), the group coordinates and develops Directorate of Supply and Services plans for USAF activities, and furnishes overall planning guidance to and in behalf of the directorate concerning the logistical aspects of AF objectives; reviews and coordinates policies concerned with the career planning, training, utilization and management of supply personnel and/or units; develops, recommends for adoption, implements and administers prestocking objectives and programs. Monitors utilization of resources for the budget and operating year; accomplishes financial planning the directorate.

Materiel Atomic Energy Group: Col. E. G. Kiehle

Administration & Security and Weapons Distribution Control branches are subdivisions of this office which operates Headquarters USAF atomic weapons control office of record (complete stockpile by type, location, allocation and condition status); receives and processes requests for atomic weapons from USAF and JCS commands; issues distribution directives for delivery of weapons to the custody of AF operational control in support of emergency war plans; exercises supervision over the delivery to final recipients, worldwide, of atomic weapons transferred in accordance with instructions; prepares and/or maintains plans covering planned worldwide allocations and deployment of atomic weapons for use by USAF, including resupply to combat forces under emergency conditions.

Aircraft & Missiles Div.: Col. F. H. Haywood, Jr.

Branches—Aircraft, Ground, Support, Engine, Missiles. Performs staff management functions and initiates and administers Headquarters USAF policy with respect to receipt, storage, and distribution of assigned commodities; initiates appropriate action to insure that all elements, agencies and other departments, worldwide, for which the Air Force has support responsibility are provided the authorized materiel in the required quantities at the proper locations and at the time needed.

Armament & Electronics Div.: Col. R. T. Fincke

Branches—Armament, Electronics. Assigned responsibility with respect to receipt, storage, and distribution of assigned commodities and the surveillance and disposal of explosives, ammunition, and communications-electronics equipment; functions include the review and formulation of policies and procedures, originating, reviewing and revising pertinent regulations and publications, formulating stock level guidance to meet distribution requirements, determination of adequacy of inventory assets to meet operational commitments, control of the allocation of major and critical items; assists in the development of the weapons systems concept as it relates to assigned commodities; monitors explosives ordnance disposal activities, reviewing and establishing ammunition, explosives and special weapons storage and safety criteria.

POL Div.: Col. M. J. McKeever, Jr.

Branches—Programs, Distribution. Performs staff management functions with regard to planning, programming, requirements computations, procurement direction, receipt, storage and distribution of all commodities assigned to the division; supervises AMC in the preparation of budget estimates for aviation fuels and oils; furnishes justification for construction of POL storage and dispensing facilities in the military construction program; has staff management responsibility for the aviation fuels division, AF stock fund, refueling service, POL terminal and base storage programs, POL quality surveillance, testing and inspection services.

General Support & Services Div.: Col. R. R. McCrery

Branches—Stock & Industrial Funds, Vehicle, Food Service & PX, Miscellaneous Support, Mortuary & Graves Registration. Manages the clothing, general supplies, commissary and Air Force Academy divisions of the AF stock fund, and the laundry and dry cleaning services, AF industrial fund; provides AF representation with the single manager assignments for clothing and textile materiel and subsistance and on the joint Army-AF menu board; assists on the materiel aspects of policies and problems which concern the board of directors of the Army-AF exchange and motion picture services; directs graves registration and mortuary services and disposition of personal effects of deceased and missing personnel. Performs staff management functions on such assigned commodities as construction and maintenance equipment, hardware items, lumber, shop machinery and vessels.

Management & Procedures Div.: Col. J. A. Mullins

Branches—Cataloging, Systems & Procedures, Field Operations. Develops, reviews, and coordinates supply policies and supply systems relating to the authorization of organizational, base and individual equipment, cataloging, requisitioning, receiving, accounting, inventory control, reporting, local purchase, storage, materiel handling, redistribution and disposal of all supplies and equipment; develops, reviews, and coordinates supply policies and supply systems relating to support of MAP. Provides supply liaison with Army, Navy and DOD. Provides acting executive director for single manager photographic equipment and supplies.

Director of Transportation: Brig. Gen. R. L. Winn

Plans and Programs Division: Col. W. E. Nix

Branches—Projects, Budget Plans. Develops and monitors transportation aspects of current and projected AF programs, including missiles and special weapon systems; transportation officer and airman career training and personnel utilization studies, exercises Air Staff budgetary functions necessary to accomplish movement of Air Force materiel under second destination transportation funds. Develops the transportation portion of AF war mobilization plans to include long range transportation requirements.

Movement Control Div.: Col. G. L. Robinson

Branches—Passenger & Household Goods, Equipment & Facilities, Cargo. Responsible for the development of policies and implementing directives for the efficient and economical worldwide movement of AF passengers, personal property, cargo, and POL; develops procedures and systems for movement by all modes of transportation in consonance with AF personnel and logistical programs; represents the AF in the development of joint transportation policies with the military departments, the military traffic management agency, and other government agencies.

Requirements & Allocations Div.: Col. J. D. Bogue

Branches—Air, Surface. Responsible for development of oversea airlift and ocean requirements; adjusts requirements to insure validity and justifies these requirements, arranges airlift to meet special domestic and oversea movements; acts as the AF departmental representative with JMTC, MATS, and MSTS, in all matters relating to movement requirements. "Determines requirement for commercial augmentation to MATS capability to meet long range DOD air transportation requirements."

Packaging & Materials Handling Div.: Col. S. P. Triffy

Responsible for central management control over the AF packaging and materials handling programs; develops and monitors AF policies for packaging and materials handling activities; reviews, coordinates, and evaluates requirements for packaging materials and equipment and materials handling equipment.

Military Motor Vehicle Div.: Col. C. R. Poole

Primarily responsible for management control of the USAF motor vehicle program; develops and supervises implementation of plans, policies, and procedures, and provides guidance relative to the operation, control, and utilization of AF motor vehicles; develops and directs the driver training program.

Director of Procurement and Production: Col. R. G. Ruegg

Office of Small Business: Kennard Weddell

Formulates policy, establishes program, and exercises staff supervision over Department of the Air Force activities concerning small business; serves as the small business advisor to the Assistant Secretary of the Air Force, materiel.

Procurement Policy Div.: Col. J. J. Treacy

Branches—Contract Method, Contract Administration, Projects. Formulates and provides staff supervision over Air Force procurement policies and procedures. This covers areas such as contract financing, pricing, termination, settlement and fraud matters; labor law compliance; administration and use of government property; furnishes AF membership on the Armed Services Procurement Regulations committees.

Industrial Resources Div.: Col. G. C. Hozier

Branches—Industrial Equipment, Facilities, Materials. Exercises staff supervision over, develops policy and furnishes guidance on matters relating to industrial facilities, production equipment, materials and real property for industrial use; provides membership on the aircraft production coordination office; provides monitorship, guidance, and control over budgetary requirements relating to industrial equipment and facilities programs.

Weapon Systems Div.: Col. L. R. Hall

Branches—Bombardment, Fighter, Support, Aircraft. Exercises staff surveillance over the procurement and production of complete aircraft and missiles; serves as a focal point in DCS/M for all matters pertaining to production of aircraft and missiles to assume proper production phasing for complete weapons systems, reviews and determines feasibility of making configuration changes to production aircraft and missiles and time phasing thereof; responsible for remedying various contractor and subcontractor difficulties, establishing priorities and necessary action to alleviate production shortages and other production engineering difficulties; responsible for the master urgency list and weapons systems phasing.

Supporting Systems & Equipment Div.: Col. D. E. Riley

Branches—Support Equipment, Propulsion, Electronics. Exercises staff surveillance over the procurement and production of supporting systems, GFAE, support equipment, electronics and communications equipment, and equipment procured for the Air Force by the Army and Navy; serves as a focal point in DCS/M to insure expeditious and efficient execution of all air staff directed procurement actions to assure proper phasing for supporting systems and equipment; monitors industrial demand requirements for components to support current and mobilization AF procurement and production programs and serves as the air staff focal point for problems related to availability of critical or controlled contractor furnished components. Provides control, management of service test, product improvement programs.

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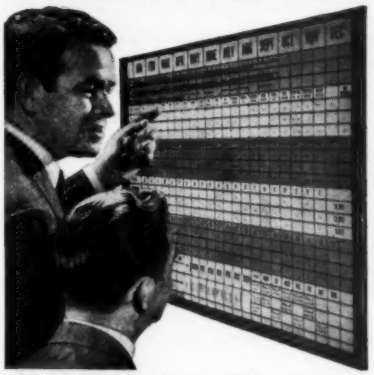

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Deputy Chief of Staff

PERSONNEL

Lt. Gen. E. O'Donnell, Jr.

THE increased complexity in aviation has had, and will continue to have, a terrific impact on the management of personnel as the requirement for the maintenance effort continues to rise.

Proof of the increasing qualitative personnel requirements to accomplish the job is demonstrated by the fact that in 1954, approximately 14 percent of the total authorized airmen were in the highly technical fields and by May, 1957, this percentage had grown to 18—a rise of well over one percent per year. The Air Force establishes personnel skill requirements under four categories—Highly Technical, Technical, Semi-Technical, and Non-Technical. In the three technical areas, requirements now exceed 50% of total personnel strength. In the Highly Technical area where requirements are increasing, reenlistment rates are lowest.

In addition to the increased complexity of aircraft and related ground environment equipment, the advent of missiles will boost the requirements for technicians at an accelerated rate. Naturally, as the missiles augment and eventually replace some manned aircraft, the requirements for rated aircrew members will decrease—it is still some time in the future before this will be done in sizeable numbers.

According to the Air Force, it appears now that the requirements for personnel trained in technical fields for missile wings will exceed those of manned wings, both in number and skill level. It may well be that as experience and confidence are gained in missile development, evaluation and testing, a more favorable balance may be attained.

Still, the Air Force's most crucial problem is likely to remain for many years the retention of highly trained young officers and airmen who possess critical technical skills.

Commenting on the problem, Gen. O'Donnell said:

"Great numbers of vacancies exist in the highly skilled areas and experience ladders. To fill them, we can do several things. Enlist and train, cross-train, reenlist and upgrade. In this case, reenlistment includes reenlistment of the man on board and the prior service man who has found civilian life wanting. In each of these actions we are aiming at the critical skill man.

"Sometime ago we initiated a test plan for a cross-training program for 5 and 7 level skills. The results have been revealing. We found that you can teach 'old dogs' new tricks. The secret is his personal attitude, dedication and determination. Through FY 1959 we are programming about 36,000 into this cross-training.

"The most dominant influence in our present day personnel planning is the increasing complexity of our weapons and equipment. And I realize that these technical facts of life have been pointed out time after time by the highest officials in our government. Further, in highlighting the rate of technical progress which the Air Force has experienced, we have presented dramatic figures to contrast the performance of new hardware with the old. We have measured in explicit terms for the public and for our own people the margin of increase we have achieved in the speed, firepower, range and accuracy of air weapons. And we have followed up these comments with more or less generalized statements that better people are needed to operate these costly, complex and high performance weapons with best results.

"But we have somehow failed to obtain the same measure of understanding and support for our efforts to improve the qualitative aspects of Air Force manpower as has been obtained for the improvement of our weapons. So we must do more to bring home to the American people the level of professional interest and skill that is required for the effective maintenance and operation of modern aircraft and guided missiles."

Responsibilities

While DCS/Operations determines the numerical requirements for personnel, DCS/Personnel is responsible for filling those requirements, and more important, is responsible for the quality of personnel. To emphasize the value of the Personnel job, here are a few quotes from an Air Staff orientation script:

"Maintaing proper balance between two demands—present and future needs—requires careful analysis, shrewd judgment, and accurate decisions. In plain terms, this means that the future success of the Air Force rests solidly on the management ability as well as the technological know-how of our people—across the board.

"Generally speaking, there is a tremendous challenge to the thinkpower of our most qualified managers and executives at all levels. These managerial tasks and decisions affect all of our resources. Ultimately, however, the continuing capability of the Air Force hinges on imaginative, new approaches to personnel management.

Professional div.: Chaplain (Col.) G. nel; coordinates and consolidates the USAF, joint agencies, all major com-

The fantastic destructive power and speed of new weapons and weapon systems notwithstanding, the abilities of our people, and the uses to which we put those abilities will determine our continuing effectiveness.

"For our overall plans to have substance, it is necessary to establish definite personnel objectives and to work toward their attainment. Following, as we see them, are those objectives:

"1. To meet quantitative and qualitative personnel requirements necessary to accomplish the Air Force mission;

"2. To maintain an entirely voluntary force, regarding both officers and airmen;

"3. To increase stability and security for our people;

"4. To increase the stature and prestige of the military services as a career.

"We find that in planning for the development of new weapon systems and their integration into our operating units, we are chiefly concerned with the factors of cost and production in relation to performance, in terms of speed, range, accuracy, and firepower. And we have usually inserted somewhere along the line in our plans, the rather vague phrase that 'personnel will not be a limiting factor.'

"From the standpoint of quantity, perhaps, this is an acceptable treatment of the program. But it completely ignores the factor of quality. And the fact is that to match every technical advance in weapons requires a comparable increase in the intelligence, skill and dedication of our people.

"Where new planes and electronics are concerned, we have spelled out most of the mental and physical attributes our people must have. Additionally, we are considering the capacity they will need in order to cope with the job environment and exacting duties peculiar to our newest family of weapons, the guided missiles.

"When you consider the critical importance of absolute accuracy of operation and the safety measures to be observed in all of these jobs—plus, of course, the need for constant readiness, you can come up with only one answer concerning skill level; the people who fly our aircraft, maintain them, operate our radar network, and man our missile sites must be professionals. They must have a far greater measure of competence than we have ever before demanded of military personnel down through all the grades.

"In addition to the technical side of our personnel problem, we must fully develop the management potential of our leaders and executives—from the uppermost levels of the Air Force down through the line supervisors.

"Primarily, the solution to the personnel problem hinges on obtaining the people who have the aptitude for the Jet & Missile Age job requirements, and on improving the quality of their skills. In other words, we must have men who have the required mental capacities, and we must develop those capacities to the fullest extent."

Organization

Deputy Chief of Staff, Personnel: Lt. Gen. E. O'Donnell, Jr.

Asst. Deputy: Maj. Gen. Robert B. Landry

Executive: Col. W. C. Pratt

Spec. Asst.: Lt. Col. C. W. Pangburn

General Officers branch: Lt. Col. J. H. Watkins

Directly responsible to the DCS/P for the implementation of all actions pertaining to general officers.

Director, WAF: Col. Emma J. Riley

Responsible to the Chief of Staff for WAF affairs and for development of all plans and policies pertaining thereto; organizationally functions under the DCS/P.

Assistant for Ground Safety: Col. W. L. Tubbs (ret.)

Engineering and Research div.: Maj. G. O. Anderson

Performs research on ground safety problems; establishes ground safety standards; publishes ground safety information; provides safety engineering consultant services.

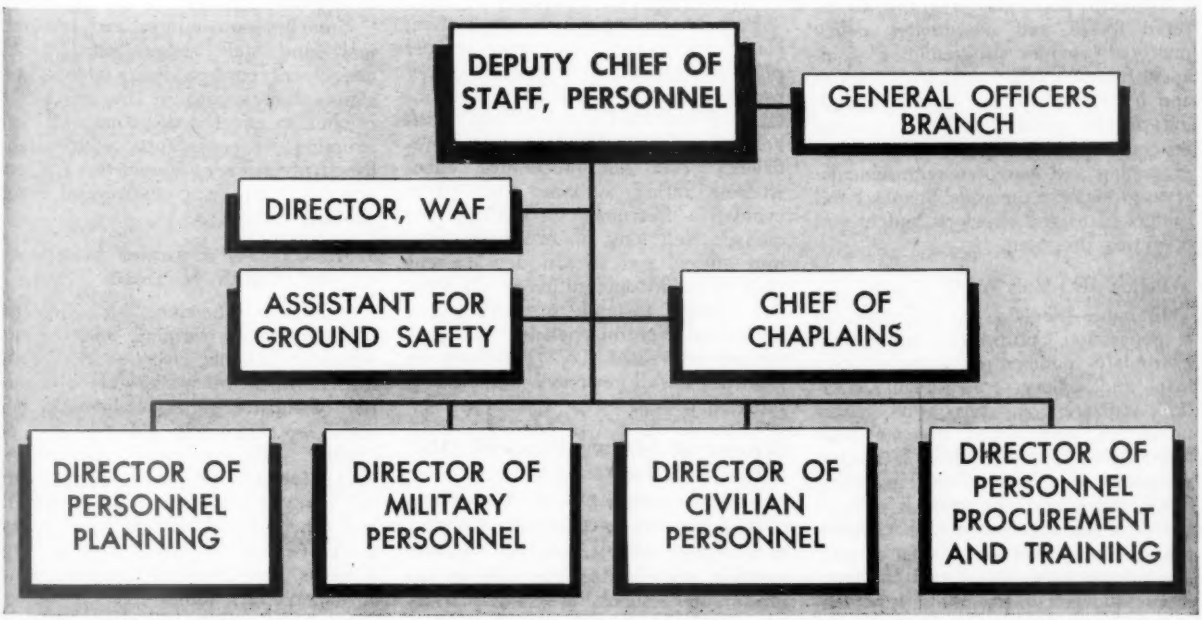
Education and Training div.: Maj. G. G. Morgan

Directs the ground safety education program; supervises publicity of ground safety program.

Reports Analysis & Survey div.: J. M. Christman

Supervises reporting procedure; publishes ground safety digest; institutes new methods for effective accident control; makes statistical studies of ground accident data.

Chief of Chaplains: Chaplain (Maj. Gen.) C. I. Carpenter



Professional div.: Chaplain (Col.) G. J. Witherspoon

Initiates, develops and supervises the program of religious activities and the professional training of AF chaplain career personnel.

Personnel div.: Chaplain (Col.) J. F. Patterson

Procures AF chaplains and makes appropriate recommendations to the director of military personnel on the assignment and reassignment of AF chaplain career personnel; formulates and assists in the formulation of personnel policies pertaining to the AF chaplain career field.

Budget & Logistics div.: A. E. Steward

Prepares, defends and monitors budgetary items for chaplains activities; administers AF chaplain supply program and nonappropriated AF chaplain fund.

Director of Personnel Planning: Maj. Gen. J. J. Nazzaro

Systems Analysis group: Col. G. Neuberg

Has responsibility to determine the objectives of an improved world-wide personnel system; conduct study on a system engineering basis to develop an improved personnel system with the integration of automatic data processing equipment; analyze current operations, procedures, and equipment, recommend changes as necessary; develop a phased plan to meet ultimate requirements for a world-wide AF personnel system.

Reserve Forces group: Col. P. R. Arnold

Develops plans and programs for reserve forces and coordinates policy matters; provides programming guidance; forecasts officer and airman gains and losses for the AF reserve including phased procurement of personnel in consonance with appropriate programming and war plan requirements; reviews major commands' financial and budget plans and develops budget and operating programs.

Policy div.: Col. W. W. Aring

Branches—legislative, procurement & separation, utilization, promotion. Formulates policies pertaining to: airman and officer procurement, rotation, utilization and separation; officer promotion; establishes policies relative to recall and retention of reserve personnel; develops policies regarding flying status and aeronautical ratings; develops and coordinates the AF position on policy matters relating to pay, emoluments, and travel and transportation allowances for military personnel; coordinates and consolidates the Air Staff position on legislative proposals affecting military and civilian personnel.

Budget & Programs div.: Col. D. Pocock

Branches—budget, programs. Develops budget estimates and financial plans including supporting data for all elements of the military and reserve personnel appropriations; controls and obligates military personnel appropriation funds; develops budget and operating manpower programs for the AF active force and provide guidance in programming matters to DCS/P and other Air Staff agencies; forecasts officer and airman gains and losses by monitoring procurement, promotion, and other personnel actions that affect the military personnel strength of the active force; evaluates personnel policies to determine their effect upon the active force strength.

Plans div.: Col. G. E. Howard

Branches—long range, wartime plans. Initiates studies, reviews progress and recommends actions directed toward attainment of long range personnel objectives; studies logistic and operational long range concepts and interprets their impact on personnel policy and procedures; performs DCS/P wartime planning and review of major command support plans; prepares the personnel portion of AF war and disaster plans; prepares early weapon systems planning guidance and maintains continuing review and status of actions required to support new systems.

Career Development div.: Col. G. B. McAllister

Branches—personnel evaluation, classification standards; officer career planning, airman and warrant officer career planning. Develops and maintains occupational structure and classification policies and procedures, proficiency tests, test procedures, effectiveness rating systems, and other evaluative instruments; develops immediate and long range officer, warrant officer, and airman development plans to include integration of education and training, assignment, classification, evaluation, control, policies and procedures; establishes DCS/P position on priorities for all personnel and training research.

Director of Military Personnel: Maj. Gen. R. J. Reeves

Colonels group: Col. E. L. Jones

Branches—Hq & Joint agencies control, zone of interior control, overseas control, schools. Assigns officers in grade of colonel to Headquarters USAF, joint agencies, all major commands, and as students in senior service schools; maintains complete files and data on certain exceptionally qualified civilian personnel for potential appointment in the AF; implements personnel policies and procedures to effect maximum utilization of officer skills and aptitudes, coordinates all other personnel actions for colonels.

Reserves Activities group: Col. C. S. Geddes

Branches—ready reserve, active military service, projects and procedures. This group is the directive agency for the Air Staff to ConAC for implementing policies pertaining to personnel actions of AFRes and ANGUS not on active military service; processes requests for appeal of delays; disseminates instructions on recall of reservists; allocates quotas for short tours; assigns reserve officer mobilization positions within Hq, USAF and other government agencies; processes requests for interdepartmental transfers.

Special Activities group: Col. L. R. Larson

Branches—retired activities, casualty, special projects. Establishes policies and procedures for operation and administration of the AF casualty program; determines status of missing personnel; maintains custody of record of emergency data for all USAF personnel; post retirement activities other than pay matters; acts as action agency on selected matters involving two or more divisions within the directorate.

Officer Assignment div.: Col. F. R. Royal

Branches—procedures and projects, joint and staff assignment, schools, assignment control, flying status. Assigns officers, below the grade of colonel, to effect major command skill manning in accordance with established precedence; administers matters pertaining to flying status and aeronautical ratings.

Warrant Officer & Airmen Assignment div.: Col. T. N. Arnett

Branches—procedures & projects, special actions, manning, selected assignment, schools, overseas flow control. Controls the world-wide distribution of enlisted personnel between the major air commands and separate activities; allocates and administers quotas for assigned personnel to attend AF, Army, Navy and civilian technical and other special schools; administers the movement of casuals to and from overseas, and monitors the movement of dependents; administers the defer-

ment and return of enlisted personnel from overseas for compassionate and hardship reasons.

Promotions & Separations div.: Col. J. B. Henry, Jr.

Branches—promotions, retirements & separations, records review, selection boards secretariat, disability separations, security. Develops operational policies and procedures, and performs all administrative functions pertaining to demotion, promotion, separation and retirement of AF personnel; administers review of officer effectiveness reports; determines action on certain OSI reports of investigation, maintains and reviews digest files; develops and implements operational policies pertaining to complaints from civilian sources concerning personal conduct and private affairs of AF personnel.

Program Control div.: Col. N. L. Ballard

Branches—plans & programs, reporting requirements & liaison, training requirements, retraining control & utilization. Plans, monitors, and coordinates the form, content, and timing of military personnel data requirements of DCS/P. Establishes military personnel training requirements; analyzes, coordinates and develops military personnel actions to determine and insure maximum military personnel support capability to meet established USAF manpower requirements.

Personnel Services div.: Col. R. E. Sliker

Branches—special services, awards, personal affairs, education and libraries, community services. Develops and conducts personnel morale development, maintenance and assistance programs. Establishes policies and procedures for the operation and administration of: AF recreation programs; officer and NCO open messes; education services, dependents schools and libraries, decorations and awards; memorialization and special honors; community service activities; AF character guidance program; liaison on U.S. Soldiers Home matters; and similar programs.

Director of Civilian Personnel: J. A. Watts

Civilian Personnel Security Secretariat group: B. R. Julien, exec. sec.

Performs secretariat duties for central security board and security appeal board.

Standards div.: F. Van Domelen

Branches—regulations, management planning. Coordinates formulation of, or develops and issues policy statements, regulations, standard operating procedures, and staffing patterns for AF civilian personnel offices.

Overseas & Field Affairs div.: P. C. Reed

Branches—plans and liaison (overseas), review and analysis, overseas employment. Develops special plans and programs for overseas civilian personnel administration; performs formal evaluations of, and provides staff assistance for improving civilian personnel programs at commands and installations, world-wide; controls recruitment of personnel in the U.S. for overseas assignments.

Career Development div.: J. E. Ehrmantraut

Branches—management development, technical development. Develops and directs the civilian training, career planning, and career development program; administers civilian contract training program and participation of civilian employees in the AF Specialized Training program; administers the AF school for civilian personnel administration.

Classification & Wage div.: R. W. Ganong

Branches—operations, programs, standards. Develops and directs the civilian position classification and wage administration programs; participates in the wage policy and rate-setting functions of the Army-AF wage board.

Placement & Employee Relations div.: J. H. Pockrass

Branches—placement, employee relations, personnel research. Develops programs and techniques for effective recruitment, selection, placement; for effective employee-management relations, including subjects such as appeals, incentives programs and welfare activities; develops special programs such as for scientific personnel and executive selection; performs research to develop techniques for improving civilian personnel operations.

Director, Personnel Procurement & Training: Maj. Gen. R. H. Carmichael

Reserve Activities group: Lt. Col. C. J. Hoey

Responsible for development of plans, policies and programs concerning individual training of AF reservists not on extended duty; also exercises staff supervision over requirements in support of non-flying reserve activities exclusive of the reserve unit training program; serves as a focal point on all reserve matters and activities conducted within the directorate.

Flying Training div.: Col. C. S. Overstreet, Jr.

Branches—flying training operations, plans & programs. Establishes plans and policies for and directs the primary, basic and advanced flying training of military personnel of the AF, AF reserve and military personnel attached to the AF for training.

Technical Training div.: Col. T. J. Barrett

Branches—plans & programs, weapon systems, support. Establishes plans and policies for and directs the individual technical training of AF military personnel and other military personnel attached to the AF for training.

Professional Education div.: Col. W. J. Wrigglesworth

Branches—pre-commission, professional education. Establishes plans and policies for and exercises Hq USAF supervision over those AF programs and activities (except aviation cadet) providing education leading to an AF commission, and those programs and activities providing the individual professional and scientific education of military personnel of the AF, AF reserve and other personnel attached to the AF for training; exercises Hq USAF supervision of the Civil Air Patrol program.

Personnel Procurement div.: Col. H. E. Kofahl

Branches—Air Force Academy appointment, airmen procurement, officer appointment, officer procurement, recruiting advertising. Establishes plans and policies for and directs the procurement of officers and airmen for the AF and the AF reserve; handles all correspondence and records pertaining to the nomination, examination, selection and appointment of cadets to the Air Force Academy.

Special Training Devices div.: Col. B. S. Barr

Branches—audiovisual aids & manuals, air crew & maintenance special training devices. Surveys the need for special training devices and establishes quantitative requirements therefor; exercises final approval of training devices, AF training manuals and films; accomplishes related procurement programming, budgeting and funding for special training devices.

Personnel Retention div.: Col. A. C. Rush

Branches—plans & programs, airmen retention, officer retention. Establishes a centralized, comprehensive and coordinated personnel program to minimize losses of trained and experienced airmen and officer personnel.

COMPTROLLER
of the Air Force

Lt. Gen. M. J. Asensio

THE mission of the Comptroller of the Air Force is to provide the Air Force, at all echelons, with budgeting, accounting, disbursing, progress and statistical reporting (and analyses relating to such areas), and auditing services.

Air Force Comptrollership had its beginnings in 1946. The aftermath of World War II with its lessons in resource limitations, emphasized the vital necessity for giving more consideration to financial management during peacetime when military expenditures are held to a minimum. With the passage of the National Security Act in 1947 and the establishment of the Department of the Air Force, the Office of the Air Comptroller was placed on the same level as the other Deputy Chief of Staff Offices.

The success of the Comptroller setup as it evolved from 1946 to 1948 at Headquarters USAF, resulted in the extension of the comptroller functional concept to all major commands and numbered air forces in 1948 as a major staff section. Various changes, additions, and corrections have taken place since then, both as directed by law and as ordered strictly within the Air Force itself to bring the Comptroller's office to its present form (see organizational chart).

In mid-July, 1957, a centralized data-processing and computing installation for Headquarters USAF (known as "The Computer Center") was put into operation. The Air Force is now preparing, for the first time since the beginning of comptrollership in the Air Force, one document (AFM 170-6) which will provide all echelons throughout the Air Force with an outline in one place of comptroller functions and responsibilities.

Since the inception of comptrollership in the Air Force, there appears to have been a tendency to associate the Comptroller with the term "control." This association, for many years, led to the misconception that the Comptroller was trying to control Air Force activities; that management reports, statistics, and information generally, were not only collected by the Comptroller but that they were specifically for his use; and finally, that he had the authority to bring about executive actions throughout the Air Force without assuming corresponding responsibility for such actions.

What Control Means

The fact that the Comptroller discovers out-of-line conditions, or has detailed information about a situation, does not represent control. Control is exercised by taking action, and action can only be taken by an official who holds delegated responsibility and authority for the operation. While the Comptroller has delegated responsibility and authority to perform support functions involving budgeting, accounting, disbursing, financial and statistical reporting, and analysis, which comprise his primary mission, he has the additional responsibility of providing the statistical systems for the management needs of other staff elements. In making the most effective use of his resources, the Comptroller must be in a position to evaluate objectively and impartially the requirements and priorities in each area, and to resist or modify demands beyond the capacity of his resources or demands which appear unreasonable or uneconomical.

Although a Comptroller is a major executive at each echelon throughout the Air Force and is a part of the top-management staff, in carrying out his responsibilities, *i.e.*, budgeting, accounting, disbursing, progress and statistical reporting and analyses relating thereto (in Headquarters USAF, also auditing), he is performing a service for the commander and other members of the top-management staff. In fact, the Comptroller's most important tasks have to do with keeping the commander and his staff informed on the broad, overall picture of the command; coordinating basic programs and budgets; preparing and issuing special reports; and providing the staff with standardized methods for analyzing and evaluating their own operations. As can be seen, the character of these responsibilities is to render service and to provide adequate and timely information to officials responsible for operations.

a. Providing staff officials with too much detailed information is likely to be just as bad as too little or too late. Determining how much information is necessary for decision-making should conform to a very simple rule, *i.e.*, can or should anything be done about the information contained in this report? When operating officials get such reports, they can arrive at a decision on what should be done within their delegated responsibilities and authority.

b. One of the greatest problems of reporting has been the balance between detail *versus* timeliness. Reports are sometimes too late to be of value to operating officials. Approximate information that is *prompt* does management more good than highly accurate information too late to be of value.

Since the inception of comptrollership in the Air Force in 1946, Comp-

troller principles and policies have undergone constant review and evaluation for the purpose of providing key operating officials with the kind of timely and adequate information they needed in the proper and effective performance of their duties.

The principles of modern management—financial planning and control, programming and control, and cost consciousness—were initiated in 1948 with the installation of the Air Force Cost Reporting System. This developed into the Appropriation and Expense Reporting System in 1952. The next step was the Financial Control Plan in 1953, which evolved into the Air Force Financial Management System. This system, established officially in 1956, prescribed, for the first time, uniform principles and policies which provided guidance for modifying all Comptroller procedures—or for developing new ones—to improve Air Force capability of giving financial management service to command.

For many years the Air Force has been provided with factual data for policy, planning, and management functions by utilizing punchcard accounting equipment. In 1952, the Air Force installed an electronic computer to be used in the computation of programs and requirements. Developments in the area of electronic computing equipment rapidly progressed until 1954 when various electronic data-processing machines became available for use within the area of business-type applications.

In 1955 the Directorate of Statistical Services, Headquarters USAF, was given responsibility for managing the use of card-punching machines and computers throughout the Air Force. In addition, a 1955 regulation outlined the policies and procedures governing the procurement, control, and use of punchcard accounting machines, computers used in solving engineering and scientific problems—including simulating devices—and data-processing equipment used in business-type applications.

Organization

Comptroller of the Air Force: Lt. Gen. M. J. Asensio

Deputy Comptroller: G. E. Ramsey, Jr.

Asst. Comptroller: Maj. Gen. R. O. Cork

Assistant for Systems: C. D. Baldwin

In compliance with law and AF regulations, monitors the devolopment of the principles, policies and practices which will produce a comprehensive and coherent system of comptroller procedures and methods for budgeting, accounting, disbursing, auditing, reporting, analysis, and related activities. Functions include such responsibilities as review and coordination of procedures developed by various directorates and other elements of the Comptroller's organization to insure that such procedures (including the detailed mechanics thereof) are consistent with basic comptroller principles and policies, and constitute a rational and connected whole.

Asst. for Field and International Relations: Col. H. A. Olson

Monitors the development of plans and policies for training and career development of comptroller military and civilian personnel, including on-the-job training, formal educational curricula at Air Force and contractor-operated schools, and Headquarters USAF Comptroller Reserve assignee and designee training. Makes recommendations to the DCS/Personnel concerning assignments, career guidance, and progression of comptroller military personnel; monitors and correlates the development of the Comptroller portion of current and long-range war, mobilization, disaster, contingency, and similar plans, and Emergency Air Staff Actions, including the review of command plans for their compatibility. Serves as a point of contact for field comptroller personnel and official visitors; prepares the Comptroller portion of the AF annual report.

Director of Accounting & Finance: Col. W. A. Sundell

Policies and Programs Group

Technical Group

Fund Accounts Div.: M. F. Spitz

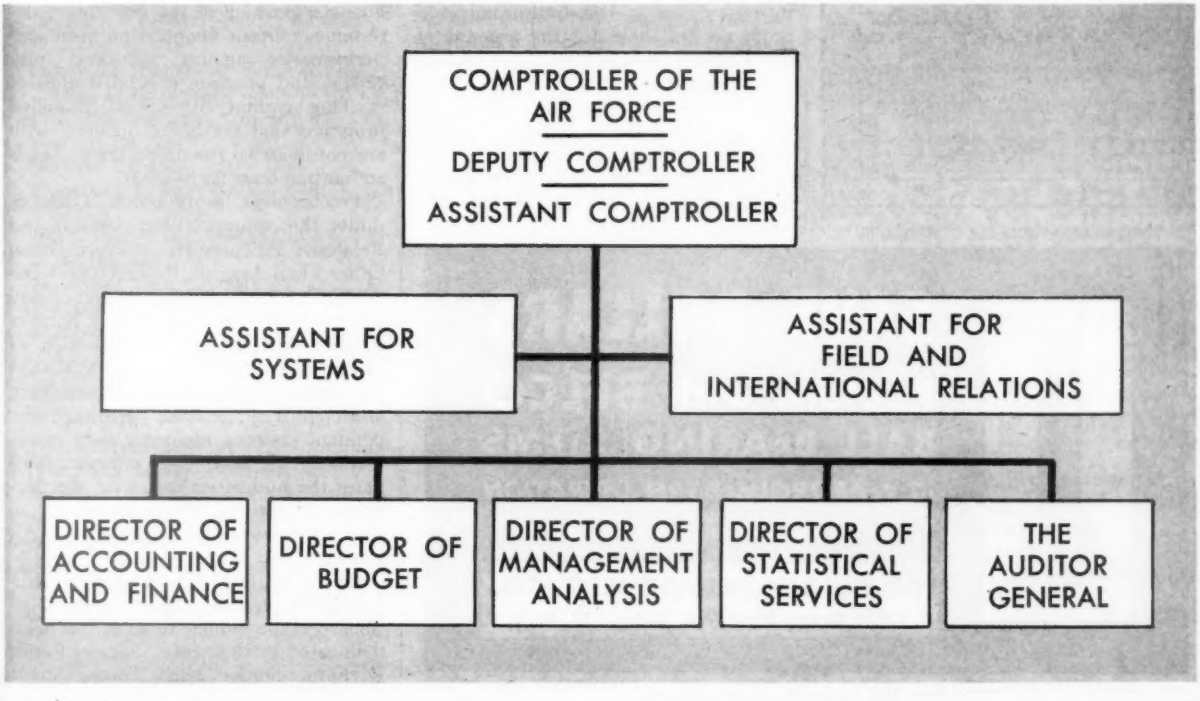
General Accounts Div.: F. B. Moye

Financial Data & Collections Div.: V. M. Dunn

Industrial & Cost Accounting Div.: A. M. Johnson

Property & Stock Fund Div.: R. S. Shepherd, Jr.

The Policies and Programs Group includes among its responsibilities the development, coordination, and prescription of overall AF policies for the



development of financial systems to meet the requirements of AF management, higher authority, and statutes; reviews policy recommendations submitted by others and takes action, as required.

The Technical Group analyzes, interprets, and, as required, submits to appropriate directorate element for further action, statutes, proposed legislation, executive orders and regulations and instructions from governmental agencies affecting financial systems and reporting practices, including the disbursement and collection of public funds; develops legislative proposals.

Fund Accounts Division, within the overall policy established by the Policies and Programs Group, designs, coordinates, and prescribes systems, procedures, methods, and techniques to provide for financial accounting and reporting for funds (including case) under the jurisdiction or custodial responsibility of the Air Force. This includes appropriations, apportionments, allocations, allotments, commitments and obligations, accrual of expenditures, disbursements, and collections.

General Accounts Division, again within Policies and Programs Group limitations, designs, coordinates, and prescribes systems, procedures, methods, and techniques to provide financial accounting and reporting for the general ledger chart of accounts; expenses; pay and allowances of military and civilian personnel; contractual payments (except those relating to property); travel and transportation; and nonappropriated funds.

Financial Data & Collections Division recommends to the Policies and Programs Group revisions to policy and procedures which appear to be necessary as a result of problems encountered in carrying out divisional responsibilities; determines reporting requirements; provides daily financial information; performs billing and collection activities on certain international and intragovernmental accounts.

Industrial & Cost Accounting Division develops, coordinates, and prescribes systems, procedures, methods and techniques to provide financial accounting for Air Force industrial fund and cost accounting areas, including laundry and dry cleaning facilities; aircraft maintenance; military air transport service; printing plants, and air installations.

Property & Stock Fund Division has a similar responsibility in providing financial property accounting for materiel received and held as regular AF inventory; materiel in transit; materiel procured and held for the account of the Foreign Aid program and foreign governments; equipment in use by organizations and activities; real property and facilities; stock fund property; materiel of the AF in the physical custody of others, and materiel of others in the physical custody of the AF; property furnished AF contractors; all necessary documentation to support the disbursement or collection of public funds for all property acquired or disposed of by or for the AF; and property lost, damaged or destroyed.

Director of Budget: Maj Gen. F. A. Bogart
- **Systems & Procedures Group**
- **Plans & Review Group**
- **Financial Analysis Group**
- **Procurement & Research Div.: D. N. Pritchett**
- **Operation & Maintenance Div.: Leon Gilgoff**
- **Military Personnel & Construction Div.: L. E. Turner**
- **Special Funds Div.: Col. W. B. Short**

Systems & Procedures Group develops basic budgetary concepts and principles covering all phases of the activities performed and procedures promulgated by the directorate of the budget, including long range budget objectives; develops all basic aspects of formats and procedures for the formulation, review, administration, and reporting of future operating budgets.

Plans & Review Group prepares and issues to estimating and operating agencies the call for estimates and for operating budget forecasts (including foreign currency budgets). Prescribes and issues time schedules, technical requirements and formats.

Financial Analysis Group, based on data available in the directorate, and progress reports and requirements furnished by other sources, performs continuous review and analysis of the financial position of the Air Force; determines current financial progress and performance against approved programs; and prepares special studies of working capital funds and classified programs that are being financed with current financial resources, recommends action based on its findings.

Procurement & Research Division, under the appropriations Aircraft and Related Procurement, Procurement Other Than Aircraft, Research and Development, and Military Assistance and Mutual Assistance Trust Funds, handles review, analysis and consolidation of budget estimates and operating budget forecasts received from the estimating and operating agencies; performs independent reviews, including field examinations, of compiling systems; prepares the budget estimates for the Secretary of the Air Force to submit to reviewing authorities outside the Air Force.

Operation & Maintenance and Military Personnel & Construction Divisions perform similar tasks in the fields delineated by their titles. Special Funds Division, under Air Force Stock,

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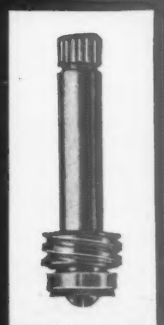

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Industrial and Management Funds, handles similar matters as well as participating with Office, Secretary of Defense and Air Staff agencies concerned in the development of policies, guidelines and military objectives, and collaborates with Director of Programs and Deputy Chief of Staff, Materiel, in the development of the Air Force Program and Materiel Guidance.

Director of Management Analysis: Brig. Gen. C. W. Cecil
Combat Div.: Col. M. P. Davis
Computation Div.: Lt. Col. H. Waldman
Support Div.: Col. C. D. B. Smith
Services Div.: Col. G. R. Anderson

Combat Division is responsible for the analysis of the major weapon (and related support) systems, and of the missions of the Air Defense Command, the Tactical Air Command, the Strategic Air Command, and the Military Air Transport Service. Computation Division develops special experiments, mathematical techniques and controls, and provides support to the directorate of statistical services to increase the reliability and productive capabilities of the electronic computer operations and products as related to computer activities throughout the Air Force.

Support Division handles management analysis responsibilities in all other elements of the Air Force not assigned to Combat Division above. The Services Division handles "special request" matters such as Air Staff requests for costs which are not available from the accounting system and must be estimated, special overall cost studies.

Director of Statistical Services: Brig. Gen. L. O. Ryan
Financial Statistics Group
Control Reports
Reports Control Group
Plans and Liaison Group: Col. T. E. Peddy
Data Processing Div.: Col. L. A. Boatwright
Personnel Statistics Div.: Col. B. R. Leach
Materiel Statistics Div.: Col. S. R. Vesper
Operations Statistics Div.: Col. J. P. Sartz, Jr.

Space limitations preclude outlining all the tasks of the Divisions found in this office. However, the directorate, in general terms, is responsible for data-processing and reporting policies and systems and operations; develops objectives, policies and procedures of the Air Force Reports Control System throughout the AF; develops, prescribes, and implements policies and procedures governing the strength-accounting systems for military, civilian, and reserve forces personnel of the Air Force; develops and coordinates short-term, mid-range and long-range plans, including peacetime, wartime, and disaster plans, to provide for time-phased and orderly performance of functional responsibility by Headquarters USAF and field comptroller elements in support of the Air Force mission.

The Auditor General: Maj. Gen. W. P. Farnsworth

Special Asst. for Field Survey:
Conducts surveys of district headquarters and district audit installations to determine that the Auditor General mission is being accomplished in an effective and efficient manner.

Liaison Office (Hq AMC), a second division of the Auditor General's office, represents the office on all audit matters at Hq AMC.

Management Div.: Col. T. O. Newell
Implements and administers military and civilian personnel programs in accordance with Auditor General policies and prescribed regulations; provides command direction to district audit offices on military matters; develops and submits estimates and financial plans necessary for the performance of the Auditor General mission.

Plans and Programs Div.: L. N. Tietelbaum
Studies the statutory and regulatory audit requirements imposed on the U.S. Air Force and makes appropriate recommendations to the Auditor General; studies the Auditor General staffing structure, etc., to evaluate the internal audit organization in relation to current and future programs of the Air Force; develops work-measurement factors and staffing standards for district headquarters and audit installations.

Asst. Auditor General (Contract Audits): G. A. Connaster
Asst. Auditor General (Internal Audits): Col. R. S. Saunders
Asst. Auditor General (Special Audits): Col. G. M. Hinckley

Within the fields designated by their titles, the offices formulate policy, implement and direct operating procedures and instructions, evaluate quality and timeliness of audit services; monitor the operation of district offices as they relate to the assigned fields of audit responsibility.

The Air Force Finance Center in Denver, Colorado, is responsible for the technical supervision of the Air Force Finance network. The center issues approximately 650,000 checks and audits 400,000 paid vouchers monthly. The Asst. Comptroller of the Air Force (Financial Matters) serves as Center commander.

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A USAF F-104 Starfighter is ground tested at Edwards Air Force Base, Calif., its afterburner adding a weird nighttime lighting effect.

USAF Installations in the Continental United States

Aeronautical Chart and Information Center, St. Louis, Missouri

Air Force Cambridge Research Center, Laurence G. Hanscom Field, Bedford, Massachusetts

Air Force Finance Center (Hqs AF Finance Division) Denver, Colorado

Air Force Missile Development Center (see Holloman AFB)

Air Force Records, 9700 Page Boulevard, St. Louis, Missouri

Air-Ground Operations School, Southern Pines, North Carolina

Air Research and Development Command, Baltimore, Maryland (Hq), (future move of Hq, ARDC, to Andrews AFB, Maryland, announced)

Altus Air Force Base, Altus, Oklahoma

Amarillo Air Force Base, Amarillo, Texas

Andrews Air Force Base, Camp Springs, Maryland (Hq Military Air Transport Service)

Ardmore Air Force Base, Ardmore, Oklahoma

Arnold Engineering Development Center, Tullahoma, Tennessee

Bainbridge Air Base, Bainbridge, Georgia

Bakalar Air Force Base, Columbus, Indiana

Barksdale Air Force Base, Shreveport, Louisiana (Hqs 2nd AF)

Bartow Air Base, Bartow, Florida

Beale Air Force Base, Marysville, California

Bergstrom Air Force Base, Austin, Texas

Biggs Air Force Base, El Paso, Texas

Blytheville Air Force Base, Blytheville, Arkansas

Boca Raton Air Force Auxiliary Field, Boca Raton, Florida

Bolling Air Force Base, Washington, D.C. (Hq Command)

Brookley Air Force Base, Mobile, Alabama

Brooks Air Force Base, San Antonio, Texas

Bryan Air Force Base, Bryan, Texas

Bunker Hill Air Force Base, Peru, Indiana

Burlington Municipal Airport, Burlington, Vermont

Byrd Field, Richmond, Virginia

Campbell Air Force Base, Hopkinsville, Kentucky

Carswell Air Force Base, Fort Worth, Texas

Castle Air Force Base, Merced, California

Chanute Air Force Base, Rantoul, Illinois

Charleston Air Force Base, Charleston, South Carolina

Cheli Air Force Station, Maywood, California

Clinton County Air Force Base, Wilmington, Ohio

Clinton-Sherman Air Force Base, Clinton, Oklahoma

Cannon Air Force Base, Clovis, New Mexico

Columbus Air Force Base, Columbus, Mississippi

Cook Air Force Base, Lompoc, California

Craig Air Force Base, Selma, Alabama

Dallas Naval Air Station, Dallas, Texas

Davis Field, Muskogee, Oklahoma

Davis-Monthan Air Force Base, Tucson, Arizona

Dobbins Air Force Base, Marietta, Georgia (Hqs 14th Air Force)

Donaldson Air Force Base, Greenville, South Carolina (Hqs 18th Air Force)

Dover Air Force Base, Dover, Delaware

Dow Air Force Base, Bangor, Maine

Duluth Municipal Airport, Duluth, Minnesota

Dyess Air Force Base, Abilene, Texas

Edwards Air Force Base, Muroc, California

Eglin Air Force Base, Valparaiso, Florida (Hq Air Proving Ground Command)

Eglin Air Force Auxiliary Field #9, Valparaiso, Florida

Ellington Air Force Base, Houston, Texas

Ellsworth Air Force Base, Rapid City, South Dakota

England Air Force Base, Alexandria, Louisiana

Ent Air Force Base, Colorado Springs, Colorado (Hq Air Defense Command)

Ethan Allen Air Force Base, Winooski, Vermont

Fairchild Air Force Base, Spokane, Washington

Forbes Air Force Base, Topeka, Kansas

Foster Air Force Base, Victoria, Texas (Hqs 19th Air Force)

Francis E. Warren Air Force Base, Cheyene, Wyoming

Gadsden Air Force Station, Gadsden, Alabama

Geiger Field, Spokane, Washington
General Mitchell Field, Milwaukee, Wisconsin
Gentile Air Force Station, Dayton, Ohio
George Air Force Base, Victorville, California
George Wright Air Force Base, Spokane, Washington
Glasgow Air Force Base, Glasgow, Montana
Goodfellow Air Force Base, San Angelo, Texas
Graham Air Base, Marianna, Florida
Grand Forks Air Force Base, Grand Forks, North Dakota
Gray Air Force Base, Killeen, Texas
Greater Pittsburgh Airport, Coraopolis, Pennsylvania
Greenville Air Force Base, Greenville, Mississippi
Grenier Air Force Base, Manchester, New Hampshire
Griffiss Air Force Base, Rome, New York
Gulfport Technical Training Air Force Hqs Site, Gulfport, Mississippi
Gunter Air Force Base, Montgomery, Alabama
Hamilton Air Force Base, San Rafael, California (Hqs 4th Air Force and Western Air Defense Force)
Harlingen Air Force Base, Harlingen, Texas
Hill Air Force Base, Ogden, Utah
Holloman Air Force Base, Alamogordo, New Mexico
Homestead Air Force Base, Homestead, Florida
Hondo Air Base, Hondo, Texas
Hunter Air Force Base, Savannah, Georgia
Indian Springs Air Force Base, Indian Springs, Nevada
James Connally Air Force Base, Waco, Texas
K. I. Sawyer Airport, Marquette, Michigan
Keesler Air Force Base, Biloxi, Mississippi
Kelly Air Force Base, San Antonio, Texas (Hq, USAF Security Service)
Kinross Air Force Base, Sault St. Marie, Michigan
Kirtland Air Force Base, Albuquerque, New Mexico (Special Weapons Center)
Klamath Falls Municipal Airport, Klamath Falls, Oregon
Lackland Air Force Base, San Antonio, Texas
Lake Charles Air Force Base, Lake Charles, Louisiana
Langley Air Force Base, Hampton, Virginia (Hq Tactical Air Command)
Laredo Air Force Base, Laredo, Texas
Larson Air Force Base, Moses Lake, Washington
Laughlin Air Force Base, Del Rio, Texas
Laurence G. Hanscom Field, Bedford, Massachusetts
Lincoln Air Force Base, Lincoln, Nebraska
Little Rock Air Force Base, Little Rock, Arkansas
Lockbourne Air Force Base, Columbus, Ohio
Long Beach Municipal Airport, Long Beach, California
Loring Air Force Base, Limestone, Maine
Lowry Air Force Base, Denver, Colorado (USAF Academy—Temporary Site)
Luke Air Force Base, Phoenix, Arizona
MacDill Air Force Base, Tampa, Florida
Malden Air Base, Malden, Missouri
Mallory Air Force Station, Memphis, Tennessee
Malmstrom Air Force Base, Great Falls, Montana
Manhattan Beach Air Force Station, Sheepshead Bay, Brooklyn, N. Y.
Marana Air Base, Marana, Arizona
March Air Force Base, Riverside, California (Hqs 15th Air Force)
Matagorda Island Air Force Range, Port O'Connor, Texas
Mather Air Force Base, Sacramento, California
Maxwell Air Force Base, Montgomery, Alabama (Air University)
McChord Air Force Base, Tacoma, Washington
McClellan Air Force Base, Sacramento, California
McConnell Air Force Base, Wichita, Kansas
McGhee-Tyson Airport, Knoxville, Tennessee
McGuire Air Force Base, Wrightstown, New Jersey
Memphis Municipal Airport, Memphis, Tennessee
Miami International Airport, Miami, Florida
Minot Air Force Base, Minot, North Dakota
Minneapolis-St. Paul International Airport, Minnesota
Mitchell Air Force Base, Hempstead, New York (Hqs Continental Air Command, Hqs 1st Air Force)
Moody Air Force Base, Valdosta, Georgia
Moore Air Base, Mission, Texas
Mountain Home Air Force Base, Mountain Home, Idaho
Myrtle Beach Air Force Base, Myrtle Beach, South Carolina
Nellis Air Force Base, Las Vegas, Nevada
New Castle County Airport, Wilmington, Delaware
Niagara Falls Municipal Airport, Niagara Falls, New York
North Air Force Auxiliary Field, North, South Carolina
Norton Air Force Base, San Bernardino, California
Offutt Air Force Base, Omaha, Nebraska (Hqs Strategic Air Command)
O'Hare International Airport, Chicago, Illinois
Olmsted Air Force Base, Middletown, Pennsylvania
Orlando Air Force Base, Orlando, Florida (Hqs Air Rescue Service, Flight Air Photo and Charting Service)
Otis Air Force Base, Falmouth, Massachusetts
Oxnard Air Force Base, Oxnard, California
Paine Air Force Base, Everett, Washington
Palm Beach Air Force Base, West Palm Beach, Florida
Parks Air Force Base, Pleasanton, California
Patrick Air Force Base, Cocoa, Florida
Perrin Air Force Base, Sherman, Texas
Peterson Field, Colorado Springs, Colorado
Pinecastle Air Force Base, Orlando, Florida
Plattsburgh Air Force Base, Plattsburgh, New York
Pope Air Force Base, Fort Bragg, North Carolina
Portland International Airport, Portland, Oregon
Portsmouth Air Force Base, Portsmouth, New Hampshire
Presque Isle Air Force Base, Presque Isle, Maine
Randolph Air Force Base, San Antonio, Texas (Hq Air Training Command)
Reese Air Force Base, Lubbock, Texas
Richards-Gebaur Air Force Base, Grandview, Missouri (Hqs Central Air Defense Force)
Robins Air Force Base, Macon, Georgia
Scott Air Force Base, Belleville, Illinois
Selfridge Air Force Base, Mount Clemens, Michigan (Hqs 10th AF)
Sewart Air Force Base, Smyrna, Tennessee
Seymour-Johnson Air Force Base, Goldsboro, North Carolina
Shaw Air Force Base, Sumter, South Carolina (Hqs 9th Air Force)
Sheppard Air Force Base, Witchita Falls, Texas
Sioux City Municipal Airport, Sioux City, Iowa
Schilling Air Force Base, Salina, Kansas

Spence Air Base, Moultrie, Georgia
Stallings Air Base, Kinston, North Carolina
Stead Air Force Base, Reno, Nevada
Stewart Air Force Base, Newburgh, New York (Hqs Eastern Air Defense Force)
Suffolk County Air Force Base, West Hampton Beach, Long Island, New York
Tinker Air Force Base, Oklahoma City, Oklahoma
Topeka Air Force Station, Topeka, Kansas
Travis Air Force Base, Fairfield, California
Truax Field, Madison, Wisconsin
Turner Air Force Base, Albany, Georgia
Tyndall Air Force Base, Panama City, Florida
Vance Air Force Base, Enid, Oklahoma
Vincent Air Force Base, Yuma, Arizona
Waco (18th Air Force Hqs Office), Waco, Texas
Walker Air Force Base, Roswell, New Mexico
Washington National Airport, Washington, D.C.
Webb Air Force Base, Big Spring, Texas
Wendover Air Force Base, Wendover, Utah
Westover Air Force Base, Chicopee Falls, Massachusetts (Hqs 8th Air Force)
Whiteman Air Force Base, Knobnoster, Missouri
Wilkins Air Force Station, Shelby, Ohio
Williams Air Force Base, Chandler, Arizona

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BUSINESS AND FINANCE

by W. Mac Stewart
Vice President, Research, Hamilton Management Corporation

Readers Ask Investment Questions

Q. I notice you have not mentioned insurance in your articles. My entire investment program is annuity insurance. Do you favor this type of investment?

A. I believe that every family man, particularly those with young children, should have a sound life insurance program before he undertakes an investment program. But life insurance is for the purpose of creating a "death estate" in the event of untimely death of the breadwinner. It should be considered only in that light—as *protection.* Few financial authorities consider insurance a good *investment.* The return from an annuity or "educational" policy is a fixed amount, which does not increase with the cost of living. In advising young men in personal financial planning, I have always favored types of policies that provide maximum protection at the lowest cost—which does not include any form of annuity or so-called "investment type" insurance. Once the insurance protection has been established, the young man can then turn his attention to creating a *living* estate where his money has opportunity to earn and grow, and from which he and his family can reap some benefits while he is *alive.*

Q. What is the best mutual fund to buy?

A. There is no "best" mutual fund for everyone. It depends entirely upon your investment goals. Whether you seek high immediate return, long-term capital growth, protection of capital with less regard for return, or any degree or combination of these, there is a fund to fit your objectives. The most popular funds are those that seek both current income and capital growth, without sacrificing one for the other. Such funds usually place major emphasis on high grade common stocks.

Q. What are the criteria for comparing mutual funds with each other?

A. Any statistical comparison of investment funds is necessarily misleading. Since the investment policies and objectives of every fund differ from those of every other fund, they cannot be properly compared on a basis of return, growth, cost, or other general category only. Each fund should be evaluated in terms of its past and anticipated future results in meeting the investment objectives of its shareholders.

New Ideas For Military Investors

"How to Make Money Make Money" recently published by Thomas Y. Crowell Company ($4.50) will answer many of today's questions on investments. Authored by Mr. Henry Gellermann, Bache & Company, executive, it will bring to you a host of information on stocks, bonds, debentures, and the functions of investment bankers, brokers and specialists. You will find this new book interesting reading and spiced with many common-sense axioms.

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• electric controls
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Compare tires to crawler tracks, for example. Four tires (2′ wide, 5½′ tall) do the work of 450 to 550 wearing parts in a track assembly. Flexing tires clean themselves, provide ground-gripping traction. Rigid tracks and grousers, on the other hand, clog up with mud and abrasive grit, need extensive cleaning often. Low-pressure tires also act as big shock absorbers, reducing shock and damage from vibration.

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Modern Tournatractor's overall design is simple — which means fewer parts to lubricate, service, or repair. Enclosed, oil-sealed anti-friction bearings on every power-transmitting part also keep Tournatractor running smoothly, with minimum maintenance. Standard-equipment torque converter, simple and trouble-free cushions damaging shock-loads from engine and power train.

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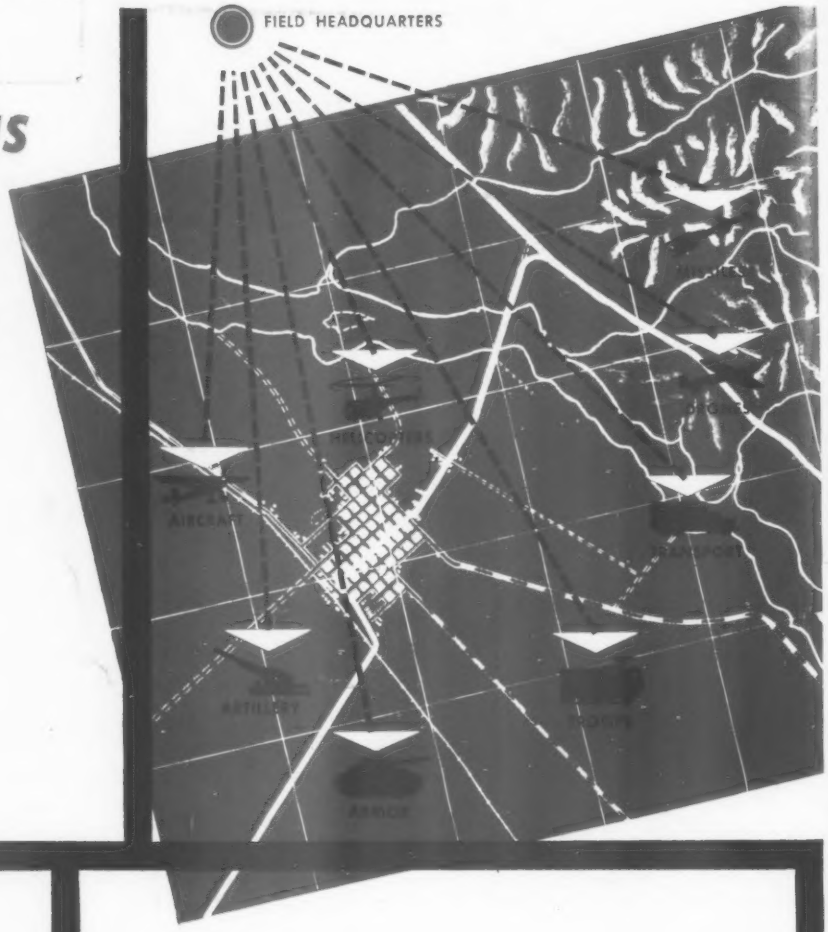

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